



MAHONEY & DOUGLAS, LTD.

ENVIRONMENTAL SERVICES

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MA6910218

April 6, 2006

Mr. George Papadopolous
US-EPA Region 1
RGP-NOC Processing
Municipal Assistance Unit (CMU)
1 Congress Street
Boston, MA 02114-2023

RE: EPA Remediation General Permit Notice of Intent (RGP - NOI)
National Marine Life Center
120 Main Street, Buzzards Bay, MA 02532
SE 7-1592
RTN 4-10373 and 4-1348

Dear Mr. Papadopolous:

On behalf of the property owner, the Town of Bourne, Mahoney & Douglas, Ltd. (M&D) is submitting this Notice of Intent for an EPA Remediation General Permit (RGP-NOI) to treat and discharge petroleum contaminated groundwater from the project facility, known as the National Marine Life Center (NMLC), during site construction redevelopment. This work is being conducted as part of a Utility Release Abatement Measure (URAM) at the NMLC (the Site) according to the Massachusetts Contingency Plan (MCP), per 310 CMR 40.0460. Refer to the USGS Topographic Map of Bourne showing the Property Locus, included as Figure 1.

Dewatering Areas

The construction activities are anticipated to be initiated in May 2006. Groundwater will be encountered during excavation in the following locations of the construction work zone:

- Along the new Utility Trench, which will connect services between the existing on-site building and the new Utility Building, and,
- At one or two (1-2) receiving pits located adjacent to the new Utility Building, which will be excavated to facilitate the start of the directional drilling and the connection of the seawater intake and discharge piping to the new Utility Building.

Refer to the Site Design Plan (TEC Sheet C 2.0 and C 3.0) showing the construction work zone and other pertinent features of the dewatering flow schematic, included as Figure 2.

Dewatering and Treatment System

Once groundwater is encountered during excavation activities, a groundwater recovery sump will be placed in the excavation. A submersible pump will be placed in the sump to remove groundwater, which will be directed to a Frac Tank to temporarily store the groundwater. The Frac Tank, which will be sized between 10,000 - 21,000 gallons, will serve as a sedimentation and separation tank. The stored groundwater will then be pumped from the Frac Tank to the treatment system.

The storage and treatment system schematic consists of the following:

Frac Tank ➔ (1) 50-micron bag filter ➔ (2) 2,000 - 6,000 pound liquid-phase granulated activated carbon (GAC) vessels piped in-series.

The GAC drums are designated as GAC #1 and GAC #2. Refer to the dewatering and treatment system schematic, included as Figure 3.

Compounds of Concern in the Influent and Effluent

A composite groundwater sample was collected from six (6) of the existing on-site monitoring wells to be representative of the influent sample to the groundwater treatment system. Based upon the untreated influent sample, the parameters that are "believed present" in the potential discharge include:

- Total Suspended Solids (TSS), Ethylbenzene, Naphthalene, 2-Methylnaphthalene, Dichloromethane, Antimony, Arsenic, Chromium, Copper, Lead, Nickel, Selenium, Zinc and Iron.

Based upon historic laboratory analytical results of groundwater collected from monitoring wells on-site, the other parameters that are "believed present" in the potential discharge include:

- Total Petroleum Hydrocarbons (TPH), Benzene, Toluene, and MTBE.

A dilution factor was applied to the metals in the influent based upon the discharge to the Cape Cod Canal. According to a study and calculations completed for the Massachusetts Maritime Academy in 1987, the Cape Cod Canal has a dilution factor of between 500 to 2,500 times. According to the Army Corp of Engineers, the Cape Cod Canal has a complete turnover of water every one and one-half (1 ½) tide cycles. Using the more conservative dilution factor of 500, each of the metals identified would be below the minimum levels allowed and, therefore, would be "believed absent". Refer to the table of results, below.

DILUTION RESULTS FOR METALS DISCHARGING TO CAPE COD CANAL

METAL	Minimum Level (ug/L)	Lab Result (ug/L)	Dilution Result (ug/L)	Effluent Limit (ug/L)
Antimony	5	<60	0.12	5.6
Arsenic	5	<10	0.02	36
Chromium III	10	20	0.04	100
Copper	5	34	0.068	3.7
Lead	3	47	0.094	8.5

Nickel	10	<40	0.08	8.2
Selenium	5	<50	0.10	71
Zinc	10	<300	0.6	85.6
Iron	NA	55	0.11	1,000

Although M&D indicated certain metals to be "believed present" on the RGP- NOI Form (where the lab results exceeded the allowable minimum level), based upon the dilution factor noted herein, all metals in the Site effluent are "believed absent".

Treatment System Monitoring

Groundwater in the treatment system train will be monitored according to the guidelines described in the RGP to include the influent, midpoint and the effluent discharge point. The influent sample is prior to GAC #1, the midpoint sample is between GAC #1 and GAC #2, and the effluent sample is at the piping exit of GAC #2. Influent and effluent sampling and laboratory analyses for the Contaminants of Concern (CoCs) will be conducted on the first day of treatment system start-up, the third and sixth day of the first week, and once a week during the first month. Monitoring will occur monthly thereafter, as warranted. The groundwater dewatering and treatment system is anticipated to be in operation for approximately one month (1 mo).

The groundwater treatment system is designed to treat and discharge groundwater at a maximum flow rate of 200 gallons per minute (gpm). The average flow rate of the discharge is 25 gpm. A flow meter and flow totalizer (volume) will be located immediately prior to the discharge port of the treated groundwater. Flow rates will be periodically monitored throughout the discharging process with the total volume (in gallons) of discharged treated groundwater recorded at the end of each day.

Discharge Pathway

The treated groundwater will be discharged to a stormwater catch basin located in front of the facility on Main Street, Buzzards Bay, MA. The catch basin is connected to a series of catch basins through an 18-inch diameter drain line, which comprise the stormwater drainage system along Main Street. This stormwater drainage system discharges through an outfall pipe to the Cape Cod Canal, which is located behind the Site and the abutting Army Corp of Engineers (ACOE) property. The work zone and stormwater drainage system are depicted on Figure 2.

Resource Areas

Resource protection was evaluated as part of the RGP-NOI and found:

- The receiving water is within a designated Ocean Sanctuary zone.
- There are no threatened or endangered species or critical habitat in the proximity of the discharge
- There are no historic properties listed or eligible for listing on the National Register of Historic Places.

Refer to the DEP Priority Resources Map, included as Figure 4.

Town of Bourne-NMLC
NPDES RGP-NOI
120 Main St., Buzzards Bay, MA
RTN: 4-10373
4/6/06

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Refer to the National Pollution Discharge & Elimination System (NPDES)- Remediation General Permit (RGP), Notice of Intent (NOI) and all supporting documentation, attached.

Thank you for your consideration of our request. Please do not hesitate to contact me if you have any questions, comments or concerns.

Sincerely,



Katherine A. Mahoney

Project Manager

encl: Attachment 1 - Notice of Intent Form
Attachment 2 - Laboratory Analytical Reports of Influent Sample
Attachment 3 - Figures
Figure 1 USGS Topographic Map of Bourne
Figure 2 Site Design Plan, TEC, Sheet C-2.0 and C-3.0, revised 3/28/06
Figure 3 Dewatering and Treatment System Schematic
Figure 4 DEP Priority Resources Map

cc: Thomas M. Guerino, Bourne Town Administrator
Kathy Zagzebski, Executive Director - National Marine Life Center
Paul Hogan, DEP/NPDES
Simon B. Thomas, LSP, PE - Atlantic Design, Inc.
Bruce Babcock, Tibbetts Engineering Corp. (TEC)
Robb Wilkinson, WIL-SPEC

Town of Bourne - NMLC
NPDES RGP-NOI
110-120 Main St., Buzzards Bay, MA
RTN 4-10373 and 4-1348
4/6/06

ATTACHMENT 1

NOTICE OF INTENT FORM

B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit**1. General site information.** Please provide the following information about the site:

a) Name of facility/site: NATIONAL MARINE LIFE CENTER	Facility/site address: 120 MAIN STREET, BUZZARDS BAY, MA		
Location of facility/site: longitude: <u>70365</u> latitude: <u>41444</u>	Facility SIC code(s):	Street:	
b) Name of facility/site owner: TOWN OF BOURNE	Town: BOURNE		
Email address of owner: townofbourne.com	State: MA	Zip: 02532	County: BARNSTABLE
Telephone no. of facility/site owner: (508) 759-0600			
Fax no. of facility/site owner: (508) 759-0620			
Address of owner (if different from site): Street: 24 PERRY AVENUE	Owner is (check one): 1. Federal <input type="checkbox"/> 2. State/Tribal <input type="checkbox"/> 3. Private <input type="checkbox"/> 4. other, if so, describe: MUNICIPALITY		
Town: BUZZARDS BAY	State: MA	Zip: 02532	County: BARNSTABLE
c) Legal name of operator: TOWN OF BOURNE	Operator telephone no.: (508) 759-0600 Operator fax no.: (508) 759-0620 Operator email: townofbourne.com		
Operator contact name and title: THOMAS M. GUERINO, TOWN ADMINISTRATOR			

Address of operator (if different from owner):		Street:														
Town:	State:	Zip:	County:													
<p>d) Check "yes" or "no" for the following:</p> <ol style="list-style-type: none"> 1. Has a prior NPDES permit exclusion been granted for the discharge? Yes <u> </u> No <u>✓</u>, if "yes," number: _____ 2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes <u> </u> No <u>✓</u>, if "yes," date and tracking #: _____ 3. Is the discharge a "new discharge" as defined by 40 CFR 122.27? Yes <u> </u> No <u> </u> 4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes <u>✓</u> No <u> </u> 																
<p>e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes <u>✓</u> No <u> </u> If "yes," please list:</p> <ol style="list-style-type: none"> 1. site identification # assigned by the state of NH or MA: MADEP RTN 4-10373 2. permit or license # assigned: 3. state agency contact information: name, location, and telephone number: MADEP/BWSC 20 RIVERSIDE DR., LAKEVILLE, MA 02347 		<p>f) Is the site/facility covered by any other EPA permit, including:</p> <ol style="list-style-type: none"> 1. multi-sector storm water general permit? Y <u> </u> N <u>✓</u>, if Y, number: _____ 2. phase I or II construction storm water general permit? Y <u> </u> N <u>✓</u>, if Y, number: _____ 3. individual NPDES permit? Y <u> </u> N <u>✓</u>, if Y, number: _____ 4. any other water quality related permit? Y <u> </u> N <u>✓</u>, if Y, number: _____ 														
<p>2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed) including:</p> <ol style="list-style-type: none"> a) Describe the discharge activities for which the owner/applicant is seeking coverage: <p align="center">DEWATERING TO FACILITATE UTILITY TRENCHING AND INSTALLATION OF PIPING WITHIN THE CONSTRUCTION ZONE OF THE NMLC.</p>																
<table border="1"> <tr> <td>b) Provide the following information about each discharge:</td> <td>1) Number of discharge points:</td> <td>2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft³/s)? Max. flow <u>0.45</u> Average flow <u>0.23</u> For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.</td> </tr> <tr> <td colspan="4" style="text-align: center;">BASED UPON STORM DRAIN FULL CAPACITY = 200 GPM</td> </tr> <tr> <td colspan="5"> <ol style="list-style-type: none"> 3) Latitude and longitude of each discharge within 100 feet: pt.1:long. <u>70365</u> lat. <u>41444</u> ; pt.2: long. <u> </u> lat. <u> </u> ; pt.3: long. <u> </u> lat. <u> </u> ; pt.4: long. <u> </u> lat. <u> </u> ; pt.5: long. <u> </u> lat. <u> </u> ; pt.6: long. <u> </u> lat. <u> </u> ; pt.7: long. <u> </u> lat. <u> </u> ; pt.8: long. <u> </u> lat. <u> </u> ; etc. </td> </tr> </table>					b) Provide the following information about each discharge:	1) Number of discharge points:	2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft ³ /s)? Max. flow <u>0.45</u> Average flow <u>0.23</u> For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.	BASED UPON STORM DRAIN FULL CAPACITY = 200 GPM				<ol style="list-style-type: none"> 3) Latitude and longitude of each discharge within 100 feet: pt.1:long. <u>70365</u> lat. <u>41444</u> ; pt.2: long. <u> </u> lat. <u> </u> ; pt.3: long. <u> </u> lat. <u> </u> ; pt.4: long. <u> </u> lat. <u> </u> ; pt.5: long. <u> </u> lat. <u> </u> ; pt.6: long. <u> </u> lat. <u> </u> ; pt.7: long. <u> </u> lat. <u> </u> ; pt.8: long. <u> </u> lat. <u> </u> ; etc. 				
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4) If hydrostatic testing, total volume of the discharge (gals):	5) Is the discharge intermittent <input checked="" type="checkbox"/> or seasonal <input type="checkbox"/> ? Is discharge ongoing Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> ?
c) Expected dates of discharge (mm/dd/yy): start <u>05/01/06</u> end <u>07/01/06</u>	d) Please attach a line drawing or flow schematic showing water flow through the facility including: 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving water(s).

TREBETTS ENGINEERING CORP.
SITE DESIGN PLAN
SHEET C 2.0 and C 3.0

SEE SITE SCHEMATIC, ATTACHED.

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for all of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to:
- Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants	Petroleum with Other Contaminants	Listed Contaminated Sites	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation
		✓				

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is believed present or believed absent in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value	Avg. daily value
						(ug/l)	concentration mass (kg)	concentration (ug/l)
1. Total Suspended Solids		✓	1	COMPOSITE	2540D	20		570
2. Total Residual Chlorine		✓	1	COMPOSITE	4500	20		<0.2
3. Total Petroleum Hydrocarbons		✓	1	COMPOSITE	1664	5		<5
4. Cyanide	✓		1	COMPOSITE	335.3	10		<0.01
5. Benzene	✓		1	COMPOSITE	8260B	2		0.6
6. Toluene		✓	1	COMPOSITE	8260B	2		0.6
7. Ethylbenzene		✓	1	COMPOSITE	8260B	2		6
8. (m,p,o) Xylenes	✓		1	COMPOSITE	8260B	2		<0.5
9. Total BTEX ⁴		✓	1	COMPOSITE	8260B	5		7.7

⁴BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value concentration (ug/l)	concentration (ug/l)	Avg. daily value mass (kg)
10. Ethylene Dibromide (1,2-Dibromo-methane)	✓		1	COMPOSITE	504.1	0.01			<0.02
11. Methyl-tert-Butyl Ether (MTBE)		✓	1	COMPOSITE	8260B	5			<0.5
12. tert-Butyl Alcohol (TBA)	✓		1	COMPOSITE	8260B	100			<20
13. tert-Anyl Methyl Ether (TAME)	✓		1	COMPOSITE	8260B	0.5			<0.5
14. Naphthalene		✓	1	COMPOSITE	8260B	2			13
15. Carbon Tetrachloride	✓		1	COMPOSITE	8260B	2			<0.5
16. 1,4 Dichlorobenzene	✓		1	COMPOSITE	8260B	2			<0.5
17. 1,2 Dichlorobenzene	✓		1	COMPOSITE	8260B	2			<0.5
18. 1,3 Dichlorobenzene	✓		1	COMPOSITE	8260B	2			<0.5
19. 1,1 Dichloroethane	✓		1	COMPOSITE	8260B	2			<0.5
20. 1,2 Dichloroethane	✓		1	COMPOSITE	8260B	2			<0.5
21. 1,1 Dichloroethylene	✓		1	COMPOSITE	8260B	2			<0.5
22. cis-1,2 Dichloroethylene	✓		1	COMPOSITE	8260B	2			<0.5
23. Dichlormethane (Methylene Chloride)		✓	1	COMPOSITE	8260B	2			<2.5
24. Tetrachloroethylene	✓		1	COMPOSITE	8260B	2			<0.5

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value	Avg. daily Value
						concentration (ug/l)	mass (kg)	concentration (ug/l)
25. 1,1,1 Trichloroethane	✓		1	COMPOSITE	8260B	2		<0.5
26. 1,1,2 Trichloroethane	✓		1	COMPOSITE	8260B	2		<0.5
27. Trichloroethylene	✓		1	COMPOSITE	8260B	2		<0.5
28. Vinyl Chloride	✓		1	COMPOSITE	8260B	2		<0.5
29. Acetone	✓		1	COMPOSITE	8260B	50		<10
30. 1,4 Dioxane	✓		1	COMPOSITE	8260B	50		<500
31. Total Phenols	✓		1	COMPOSITE	8270C	1		<6 *
32. Pentachlorophenol	✓		1	COMPOSITE	8270C	10		<1.1
33. Total Phthalates ⁵ (Phthalate esters)	✓		1	COMPOSITE	8270C	5		<6 *
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		1	COMPOSITE	8270C	5		<6
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	COMPOSITE	8270C	NA	0.33	
a. Benzo(a) Anthracene	✓		1	COMPOSITE	8270C	5		<0.11
b. Benzo(a) Pyrene	✓		1	COMPOSITE	8270C	10		<0.11
c. Benzo(b)Fluoranthene	✓		1	COMPOSITE	8270C	10		<0.11
d. Benzo(k) Fluoranthene	✓		1	COMPOSITE	8270C	10		<0.11
e. Chrysene	✓		1	COMPOSITE	8270C	10		<0.11

⁵The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value	Average daily value	
						concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzof(a,h) anthracene	✓		1	COMPOSITE	8270C	10		0.19	
g. Indeno(1,2,3-cd) Pyrene	✓		1	COMPOSITE	8270C	10		0.14	
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	COMPOSITE	8270C	NA		1.76	
h. Acenaphthene	✓		1	COMPOSITE	8270C	1		0.84	
i. Acenaphthylene	✓		1	COMPOSITE	8270C	10		<0.56	
j. Anthracene	✓		1	COMPOSITE	8270C	10		<0.56	
k. Benzo(ghi) Perylene	✓		1	COMPOSITE	8270C	5		0.14	
l. Fluoranthene	✓		1	COMPOSITE	8270C	1		<0.56	
m. Fluorene	✓		1	COMPOSITE	8270C	10		0.78	
n. Naphthalene-	✓		1	COMPOSITE	8270C	2		<0.56	
o. Phenanthrene	✓		1	COMPOSITE	8270C	2		<0.56	
p. Pyrene	✓		1	COMPOSITE	8270C	10		<0.56	
37. Total Polychlorinated Biphenyls (PCBs)	✓		1	COMPOSITE	8082	0.5		<0.2	
38. Antimony	✓		1	COMPOSITE	7041	5		<60	
39. Arsenic	✓		1	COMPOSITE	6010B	5		<10	
40. Cadmium	✓		1	COMPOSITE	6010B	5		<5	
41. Chromium III	✓		1	COMPOSITE	6010B	10		20	
42. Chromium VI	✓		1	COMPOSITE	3500	10		<10	

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value	
							concentration (ug/l)	mass (kg) concentration (ug/l)
43. Copper		✓	1	COMPOSITE	6010B	5		34
44. Lead		✓	1	COMPOSITE	7421	3		47
45. Mercury	✓		1	COMPOSITE	7470	0.2		<0.2
46. Nickel		✓	1	COMPOSITE	6010B	10		<40
47. Selenium		✓	1	COMPOSITE	7740	5		<50
48. Silver		✓	1	COMPOSITE	6010B	10		<7
49. Zinc		✓	1	COMPOSITE	6010B	10		<300
50. Iron		✓	1	COMPOSITE	6010B	NA		55
Other (describe):		✓	1	COMPOSITE	8720C	NA		3.3

c) For discharges where metals are believed present, please fill out the following:

Step 1: Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	If yes, which metals? ANTIMONY, ARSENIC, CHROMIUM III, COPPER, LEAD, NICKEL, SELENIUM, ZINC, IRON
Step 2: For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: _____ DF: <input type="text" value="500"/>	Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> If "Yes," list which metals:

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:

PUMP --- FRAC TANK -- BAG FILTER -- ACTIVATED CARBON UNIT #1 -- ACTIVATED CARBON UNIT #2 -- FLOW CONTROLS AND GAUGE --
DISCHARGE LINE TO STORM DRAIN

b) Identify each applicable treatment unit (check all that apply):	Frac. tank <input checked="" type="checkbox"/>	Air stripper	Oil/water separator	Equalization tanks	Bag filter <input checked="" type="checkbox"/>	GAC filter <input checked="" type="checkbox"/>
	Chlorination	Dechlorination	Other (please describe):			

c) Proposed average and maximum flow rates (gallons per minute) for the discharge and the design flow rate(s) (gallons per minute) of the treatment system:
Average flow rate of discharge 100 Maximum flow rate of treatment system 200 Design flow rate of treatment system 200

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

NA

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct _____	Within facility _____	Storm drain <input checked="" type="checkbox"/>	River/brook _____	Wetlands _____	Other (describe): _____
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b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:

THE DISCHARGE WILL BE DIRECTED TO THE STORM DRAIN ON THE SOUTH SIDE OF MAIN STREET, IN FRONT OF THE FACILITY. THIS STORM DRAIN IS INTERCONNECTED WITH OTHER STORM DRAINS ALONG MAIN STREET, WHICH ULTIMATELY DISCHARGE TO THE CAPE COD CANAL THROUGH AN OUTFALL PIPE LOCATED APPROXIMATELY 100 FEET DOWNGRADIENT OF THE SITE.

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water.	
1. For multiple discharges, number the discharges sequentially.	
2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water	
The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.	
d) Provide the state water quality classification of the receiving water <u>SB</u> ,	
e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water <u>NA</u> cfs	
Please attach any calculation sheets used to support stream flow and dilution calculations.	
f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes <u> </u> No <input checked="" type="checkbox"/> If yes, for which pollutant(s)?	
Is there a TMDL? Yes <u> </u> No <u> </u> If yes, for which pollutant(s)?	
6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.	
a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes <u> </u> No <input checked="" type="checkbox"/> or is consultation underway? Yes <u> </u> No <input checked="" type="checkbox"/>	
Has any consultation with the federal services been completed? Yes <u> </u> No <input checked="" type="checkbox"/>	
What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one):	
a “no jeopardy” opinion? <u> </u> or written concurrence <u> </u> on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?	
b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?	
Yes <u> </u> No <input checked="" type="checkbox"/> Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes <u> </u> No <input checked="" type="checkbox"/>	

7. Supplemental information.

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

COVER LETTER WITH METALS DILUTION RESULTS.

NPDES INFLOW LABORATORY ANALYTICAL REPORTS, ATTACHED.

PROPERTY LOCUS AND SITE SCHEMATIC, ATTACHED. THE SITE SCHEMATIC SHOWS THE CONSTRUCTION DEWATERING ZONES, THE TREATMENT UNIT STAGING AREA, THE DISCHARGE POINT, THE OUTFALL PIPE AND THE RECEIVING WATER BODY.

TREATMENT SYSTEM FLOW SCHEMATIC, ATTACHED.

DEP PRIORITY RESOURCES MAP, ATTACHED.

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFRR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name:	 Tom M. Goss
Operator signature:	 Tom M. Goss
Title:	Plant Administrator
Date:	3-24-06

Town of Bourne - NMLC
NPDES RGP-NOI
110-120 Main St., Buzzards Bay, MA
RTN 4-10373 and 4-1348
4/6/06

ATTACHMENT 2
LABORATORY ANALYTICAL REPORTS

GROUNDWATER ANALYTICAL

Groundwater Analytical, Inc.
P.O. Box 1200
228 Main Street
Buzzards Bay, MA 02532

Telephone (508) 759-4441
FAX (508) 759-4475
www.groundwateranalytical.com

February 28, 2006

Ms. Kate Mahoney
Mahoney & Douglas
27 Sophie Lane
E. Falmouth, MA 02536

LABORATORY REPORT

Project: **NMLC/06-267**
Lab ID: **91892**
Received: **02-22-06**

Dear Kate:

Enclosed are the analytical results for the above referenced project. The project was processed for Rush 3 Business Day turnaround.

This letter authorizes the release of the analytical results, and should be considered a part of this report. This report contains a sample receipt report detailing the samples received, a project narrative indicating project changes and non-conformances, a quality control report, and a statement of our state certifications.

The analytical results contained in this report meet all applicable NELAC standards, except as may be specifically noted, or described in the project narrative. This report may only be used or reproduced in its entirety.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,



Jonathan R. Sanford
President

JRS/kal
Enclosures

GROUNDWATER ANALYTICAL

Sample Receipt Report

Project: NMLC/06-267
 Client: Mahoney & Douglas
 Lab ID: 91892

Delivery: Hand
 Airbill: n/a
 Lab Receipt: 02-22-06

Temperature: 9.1°C
 Chain of Custody: Present
 Custody Seal(s): n/a

Lab ID	Field ID	Matrix	Sampled	Method			Notes
91892-1	NPDES Influent	Aqueous	2/22/06 13:30	SM 2540 D Total Suspended Solids			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship
C739140	1 L Plastic	Proline	BX20042	None	n/a	n/a	02-22-06

Lab ID	Field ID	Matrix	Sampled	Method			Notes
91892-2	NPDES Influent	Aqueous	2/22/06 13:30	SM 3500-Cr D Hexavalent Chromium			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship
C739328	500 mL Plastic	Proline	BX20048	None	n/a	n/a	02-22-06

Lab ID	Field ID	Matrix	Sampled	Method			Notes
91892-3	NPDES Influent	Aqueous	2/22/06 13:30	EPA 8082 PCBs			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship
C739007	1 L Amber Glass	Proline	BX20006	None	n/a	n/a	02-22-06
C739006	1 L Amber Glass	Proline	BX20006	None	n/a	n/a	02-22-06

Lab ID	Field ID	Matrix	Sampled	Method			Notes
91892-5	NPDES Influent	Aqueous	2/22/06 13:30	EPA 1664 Hexane Extractable Material			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship
C793942	1 L Amber Glass	Proline	BX20021	H2SO4	R-4796A	02-16-06	02-22-06
C793941	1 L Amber Glass	Proline	BX20021	H2SO4	R-4796A	02-16-06	02-22-06

Lab ID	Field ID	Matrix	Sampled	Method			Notes
91892-6	NPDES Influent	Aqueous	2/22/06 13:30	EPA 9012A Total Cyanide			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship
C777891	500 mL Plastic	Proline	BX19770	NaOH	R-4593A	02-01-06	02-22-06

Lab ID	Field ID	Matrix	Sampled	Method			Notes
91892-7	NPDES Influent	Aqueous	2/22/06 13:30	EPA 6010B As Cd Cr Cu Fe Ni Ag Zn Total EPA 7041 Antimony by GFAA Sb EPA 7421 Lead by GFAA Lead by GFAA EPA 7470A Hg Total EPA 7740 Selenium by GFAA Selenium by GFAA			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship
C764056	250 mL Plastic	Proline	BX19587	HNO3	R-4550E	01-13-06	02-22-06

Lab ID	Field ID	Matrix	Sampled	Method			Notes
91892-8	NPDES Influent	Aqueous	2/22/06 13:30	SM 4500-Cl G Total Residual Chlorine			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship
C772622	250 mL Glass	Proline	BX19349	None	n/a	n/a	01-27-06

Lab ID	Field ID	Matrix	Sampled	Method			Notes
91892-9	NPDES Influent	Aqueous	2/22/06 13:30	EPA 8260B Volatile Organics with Oxygenates			
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship
C723788	40 mL VOA Vial	Proline	BX19944	HCl	R-4601F	02-17-06	02-22-06
C723776	40 mL VOA Vial	Proline	BX19944	HCl	R-4601F	02-17-06	02-22-06
C723764	40 mL VOA Vial	Proline	BX19944	HCl	R-4601F	02-17-06	02-22-06

**GROUNDWATER
ANALYTICAL**

Sample Receipt Report (Continued)

Project: NMLC/06-267
 Client: Mahoney & Douglas
 Lab ID: 91892

Delivery: Hand
 Airbill: n/a
 Lab Receipt: 02-22-06

Temperature: 9.1°C
 Chain of Custody: Present
 Custody Seal(s): n/a

Lab ID	Field ID		Matrix	Sampled	Method				Notes
91892-10	NPDES Influent		Aqueous	2/22/06 13:30	EPA 504.1 EDB and DBCP				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C716354	40 mL VOA Vial	Proline	BX19169	Na2S2O3	R-4067A	12-05-05	02-22-06		
C716351	40 mL VOA Vial	Proline	BX19169	Na2S2O3	R-4067A	12-05-05	02-22-06		
C716330	40 mL VOA Vial	Proline	BX19169	Na2S2O3	R-4067A	12-05-05	02-22-06		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
91892-11	Trip Blank		Aqueous	2/22/06 0:00	EPA 504.1 EDB and DBCP				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C716353	40 mL VOA Vial	Proline	BX19169	Na2S2O3	R-4067A	12-05-05	02-22-06		

Lab ID	Field ID		Matrix	Sampled	Method				Notes
91892-12	NPDES Influent		Aqueous	2/22/06 13:30	EPA 8270C Semivolatile Organics (Low Level)				
Con ID	Container	Vendor	QC Lot	Preserv	QC Lot	Prep	Ship		
C769499	1 L Amber Glass	n/a	n/a	None	n/a	n/a	n/a		

GROUNDWATER ANALYTICAL

Inorganic Chemistry

Field ID: NPDES Influent

Matrix: Aqueous

Project: NMLC/06-267

Received: 02-22-06 14:45

Client: Mahoney & Douglas

Lab ID: 91892-01

Sampled: 02-22-06 13:30

Container: 1 L Plastic

Preservation: Cool

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	570	mg/L	20	10	50 mL	02-23-06 14:12	TSS-1194-W	SM 2540 D	3	EB

Lab ID: 91892-02

Sampled: 02-22-06 13:30

Container: 500 mL Plastic

Preservation: Cool

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chromium, Hexavalent	BRL	mg/L	0.01	1	5 mL	02-22-06 22:58	HC-0253-W	SM 3500-Cr D	1	DDW

Lab ID: 91892-05

Sampled: 02-22-06 13:30

Container: 1 L Amber Glass

Preservation: H₂SO₄/Cool

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Oil and Grease, Total	BRL	mg/L	5	1	1000 mL	02-24-06 14:00	HO-0207-W	EPA 1664	3	DEB

Lab ID: 91892-06

Sampled: 02-22-06 13:30

Container: 500 mL Plastic

Preservation: NaOH/Cool

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Cyanide, Total	BRL	mg/L	0.01	1	50 mL	02-23-06 13:41	TCN-1161-W	EPA 335.3	1	AVB

Lab ID: 91892-08

Sampled: 02-22-06 13:30

Container: 250 mL Glass

Preservation: Cool

Analyte	Result	Units	RL	DF	Volume	Analyzed	QC Batch	Method	Inst	Analyst
Chlorine, Total Residual	BRL	mg/L	0.2	1	5 mL	02-22-06 21:30	TRC-0411-W	SM 4500-Cl G	2	LJD

Method Reference: Methods for Chemical Analysis of Water and Wastes, US EPA, EPA-600/4-790-020 (Revised 1983), and Methods for the Determination of Inorganic Substances in Environmental Samples, US EPA, EPA/600/R-93/100 (1993), and Standard Methods for the Examination of Water and Wastewater, APHA, Twentieth Edition (1998), and Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

RL Reporting Limit.

DF Dilution Factor.

1 Instrument ID: Lachat 8000 Autoanalyzer

2 Instrument ID: Milton Roy Spectronic 401

3 Instrument ID: Mettler AT 200 Balance

GROUNDWATER ANALYTICAL

EPA Method 8082 Polychlorinated Biphenyls (PCBs) by GC/ECD

Field ID: NPDES Influent
 Project: NMLC/06-267
 Client: Mahoney & Douglas
 Laboratory ID: 91892-03
 Sampled: 02-22-06 13:30
 Received: 02-22-06 14:45
 Extracted: 02-23-06 07:00
 Cleaned Up: 02-23-06 11:00
 Analyzed: 02-23-06 12:16
 Analyst: CRL

Matrix: Aqueous
 Container: 1 L Amber Glass
 Preservation: Cool
 QC Batch ID: PB-2209-F
 Instrument ID: GC-6 HP 5890
 Sample Weight: 950 mL
 Final Volume: 1 mL
 Dilution Factor: 1

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.2
11104-28-2	Aroclor 1221	BRL		ug/L	0.2
11141-16-5	Aroclor 1232	BRL		ug/L	0.2
53469-21-9	Aroclor 1242	BRL		ug/L	0.2
12672-29-6	Aroclor 1248	BRL		ug/L	0.2
11097-69-1	Aroclor 1254	BRL		ug/L	0.2
11096-82-5	Aroclor 1260	BRL		ug/L	0.2
37324-23-5	Aroclor 1262 ^t	BRL		ug/L	0.2
11100-14-4	Aroclor 1268 ^t	BRL		ug/L	0.2

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro-m-xylene	0.21	0.20	95 %
	Decachlorobiphenyl	0.21	0.20	96 %
Second Column	Tetrachloro-m-xylene	0.21	0.21	98 %
	Decachlorobiphenyl	0.21	0.19	92 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 t Non-target analyte. Result is based on a single mid-range calibration standard.

GROUNDWATER ANALYTICAL

Trace Metals

Field ID: **NPDES Influent**
 Project: **NMLC/06-267**
 Client: **Mahoney & Douglas**
 Laboratory ID: **91892-07**
 Sampled: **02-22-06 13:30**
 Received: **02-22-06 14:45**
 Matrix: **Aqueous**
 Container: **250 mL Plastic**
 Preservation: **HNO3 / Cool**
 Preserved: **02-22-06 13:30**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 7041 ¹	MB-1944-W	EPA 3010A	02-23-06 09:14	50 mL	CFAA-I PE 5100	MWR
EPA 6010B ²	MB-1944-W	EPA 3010A	02-23-06 09:14	50 mL	ICP-2 PE 3300	MWR
EPA 7421 ³	MB-1944-W	EPA 3010A	02-23-06 09:14	50 mL	CFAA-I PE 5100	MWR
EPA 7470A ⁴	MP-1802-W	EPA 7470A	02-23-06 09:10	25 mL	CVAA-I PE FINIS	KLB
EPA 7740 ⁵	MB-1944-W	EPA 3010A	02-23-06 09:14	50 mL	CFAA-I PE 5100	MWR

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony, Total	BRL		mg/L	0.06	1	02-24-06 16:36	EPA 7041 ¹
7440-38-2	Arsenic, Total	BRL		mg/L	0.01	1	02-27-06 14:10	EPA 6010B ²
7440-43-9	Cadmium, Total	BRL		mg/L	0.005	1	02-27-06 14:10	EPA 6010B ²
7440-47-3	Chromium, Total	0.02		mg/L	0.01	1	02-27-06 14:10	EPA 6010B ²
7440-50-8	Copper, Total	0.034		mg/L	0.025	1	02-27-06 14:10	EPA 6010B ²
7439-89-6	Iron, Total	55		mg/L	0.1	1	02-27-06 14:10	EPA 6010B ²
7439-92-1	Lead, Total	0.047		mg/L	0.005	1	02-28-06 09:57	EPA 7421 ³
7439-97-6	Mercury, Total	BRL		mg/L	0.0002	1	02-23-06 13:08	EPA 7470A ⁴
7440-02-0	Nickel, Total	BRL		mg/L	0.04	1	02-27-06 14:10	EPA 6010B ²
7782-49-2	Selenium, Total	BRL		mg/L	0.05	1	02-28-06 15:23	EPA 7740 ⁵
7440-22-4	Silver, Total	BRL		mg/L	0.007	1	02-27-06 14:10	EPA 6010B ²
7440-66-6	Zinc, Total	0.3		mg/L	0.2	1	02-27-06 14:10	EPA 6010B ²

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

DF Dilution Factor.

GROUNDWATER ANALYTICAL

EPA Method 8260B Volatile Organics by GC/MS

Field ID: NPDES Influent
 Project: NMLC/06-267
 Client: Mahoney & Douglas
 Laboratory ID: 91892-09
 Sampled: 02-22-06 13:30
 Received: 02-22-06 14:45
 Analyzed: 02-25-06 15:21
 Analyst: LMG

Matrix: Aqueous
 Container: 40 mL VOA Vial
 Preservation: HCl/Cool
 QC Batch ID: VM4-3454-W
 Instrument ID: MS-4 HP 6890
 Sample Volume: 25 mL
 Dilution Factor: 1

Page: 1 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorodifluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	2
75-35-4	1,1-Dichloroethene	BRL		ug/L	0.5
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	5
67-64-1	Acetone	BRL		ug/L	10
75-15-0	Carbon Disulfide	BRL		ug/L	5
75-09-2	Methylene Chloride	BRL		ug/L	2.5
156-60-5	trans- 1,2-Dichloroethene	BRL		ug/L	0.5
1634-04-4	Methyl tert-butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	cis- 1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	0.6		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	cis- 1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	0.6		ug/L	0.5
10061-02-6	trans- 1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	6		ug/L	0.5
108-38-3/106-42-3	meta-Xylene and para-Xylene	BRL		ug/L	0.5
95-47-6	ortho-Xylene	BRL		ug/L	0.5

GROUNDWATER ANALYTICAL

EPA Method 8260B (Continued) Volatile Organics by GC/MS

Field ID: NPDES Influent
 Project: NMLC/06-267
 Client: Mahoney & Douglas
 Laboratory ID: 91892-09
 Sampled: 02-22-06 13:30
 Received: 02-22-06 14:45
 Analyzed: 02-25-06 15:21
 Analyst: LMG

Matrix: Aqueous
 Container: 40 mL VOA Vial
 Preservation: HCl/Cool
 QC Batch ID: VM4-3454-W
 Instrument ID: MS-4 HP 6890
 Sample Volume: 25 mL
 Dilution Factor: 1

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	3		ug/L	0.5
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	n-Propylbenzene	5		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	tert-Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	sec-Butylbenzene	1		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	n-Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	13		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	tert-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl tert-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	tert-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	10	104 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	9.9	99 %	70 - 130 %
Toluene-d ₈	10	9.7	97 %	70 - 130 %
4-Bromofluorobenzene	10	10	100 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

**GROUNDWATER
ANALYTICAL****EPA Method 504.1
EDB and DBCP by GC/ECD**

Field ID: **NPDES Influent**
Project: **NMLC/06-267**
Client: **Mahoney & Douglas**

Laboratory ID: **91892-10**
Sampled: **02-22-06 13:30**
Received: **02-22-06 14:45**
Extracted: **02-28-06 12:00**
Analyzed: **02-28-06 13:16**
Analyst: **CRL**

Matrix: **Aqueous**
Container: **40 mL VOA Vial**
Preservation: **Cool**

QC Batch ID: **PV-0819-E**
Instrument ID: **GC-5 HP 5890**
Sample Volume: **32 mL**
Final Volume: **1 mL**
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.02
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	BRL		ug/L	0.02

Method Reference: Methods for the Determination of Organic Compounds in Drinking Water, Supplement III, US EPA, EPA-600/R-95/131 (1995). Method Revision 1.1.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

**GROUNDWATER
ANALYTICAL****EPA Method 504.1
EDB and DBCP by GC/ECD**

Field ID: **Trip Blank**
Project: **NMLC/06-267**
Client: **Mahoney & Douglas**
Laboratory ID: **91892-11**
Sampled: **02-22-06 00:00**
Received: **02-22-06 14:45**
Extracted: **02-28-06 12:00**
Analyzed: **02-28-06 15:34**
Analyst: **CRL**

Matrix: **Aqueous**
Container: **40 mL VOA Vial**
Preservation: **Cool**
QC Batch ID: **PV-0819-E**
Instrument ID: **GC-5 HP 5890**
Sample Volume: **35 mL**
Final Volume: **1 mL**
Dilution Factor: **1**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.02
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	BRL		ug/L	0.02

Method Reference: Methods for the Determination of Organic Compounds in Drinking Water, Supplement III, US EPA, EPA-600/R-95/131 (1995). Method Revision 1.1.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

GROUNDWATER ANALYTICAL

EPA Method 8270C Semivolatile Organics by GC/MS (Part 1)

Field ID: NPDES Influent
 Project: NMLC/06-267
 Client: Mahoney & Douglas
 Laboratory ID: 91892-12
 Sampled: 02-22-06 13:30
 Received: 02-22-06 14:45
 Extracted: 02-23-06 15:00
 Analyzed: 02-25-06 22:30
 Analyst: CMM

Matrix: Aqueous
 Container: 500 mL Plastic
 Preservation: H₂SO₄/Cool
 QC Batch ID: SV-1841-F
 Instrument ID: MS-3 HP 5890
 Sample Volume: 900 mL
 Final Volume: 1 mL
 Dilution Factor: 1

Page: 1 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	6
110-86-1	Pyridine	BRL		ug/L	6
108-95-2	Phenol	BRL		ug/L	6
62-53-3	Aniline	BRL		ug/L	6
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	6
95-57-8	2-Chlorophenol	BRL		ug/L	6
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	6
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	6
100-51-6	Benzyl Alcohol	BRL		ug/L	6
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	6
95-48-7	2-Methylphenol	BRL		ug/L	6
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	6
108-39-4/106-44-5	3 and 4-Methylphenol *	BRL		ug/L	6
621-64-7	N-Nitrosodi-n-propylamine	BRL		ug/L	6
98-86-2	Acetophenone	BRL		ug/L	6
67-72-1	Hexachloroethane	BRL		ug/L	6
98-95-3	Nitrobenzene	BRL		ug/L	6
78-59-1	Isophorone	BRL		ug/L	6
88-75-5	2-Nitrophenol	BRL		ug/L	6
105-67-9	2,4-Dimethylphenol	BRL		ug/L	6
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	6
120-83-2	2,4-Dichlorophenol	BRL		ug/L	6
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	6
106-47-8	4-Chloroaniline	BRL		ug/L	6
87-68-3	Hexachlorobutadiene	BRL		ug/L	6
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	6
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	6
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	6
95-95-4	2,4,5-Trichlorophenol	BRL		ug/L	6
91-58-7	2-Chloronaphthalene	BRL		ug/L	6
88-74-4	2-Nitroaniline	BRL		ug/L	6
100-25-4	1,4-Dinitrobenzene	BRL		ug/L	6
131-11-3	Dimethyl phthalate	BRL		ug/L	6
99-65-0	1,3-Dinitrobenzene	BRL		ug/L	6
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	6
528-29-0	1,2-Dinitrobenzene	BRL		ug/L	6
99-09-2	3-Nitroaniline	BRL		ug/L	6
51-28-5	2,4-Dinitrophenol	BRL		ug/L	6
100-02-7	4-Nitrophenol	BRL		ug/L	6
132-64-9	Dibenzofuran	BRL		ug/L	6
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	6
84-66-2	Diethyl phthalate	BRL		ug/L	6
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	6
100-01-6	4-Nitroaniline	BRL		ug/L	6
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	6

GROUNDWATER ANALYTICAL

EPA Method 8270C (Continued) Semivolatile Organics by GC/MS (Part 1)

Field ID: NPDES Influent
 Project: NMLC/06-267
 Client: Mahoney & Douglas
 Laboratory ID: 91892-12
 Sampled: 02-22-06 13:30
 Received: 02-22-06 14:45
 Extracted: 02-23-06 15:00
 Analyzed: 02-25-06 22:30
 Analyst: CMM

Matrix: Aqueous
 Container: 500 mL Plastic
 Preservation: H₂SO₄/Cool
 QC Batch ID: SV-1841-F
 Instrument ID: MS-3 HP 5890
 Sample Volume: 900 mL
 Final Volume: 1 mL
 Dilution Factor: 1

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
86-30-6	N-Nitrosodiphenylamine [†]	BRL		ug/L	6
122-66-7	1,2-Diphenylhydrazine [‡]	BRL		ug/L	6
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	6
86-74-8	Carbazole	BRL		ug/L	6
84-74-2	Di-n-butyl phthalate	BRL		ug/L	6
85-68-7	Butyl benzyl phthalate	BRL		ug/L	6
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	6
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	6
117-84-0	Di-n-octyl phthalate	BRL		ug/L	6
QC Surrogate Compound		Spiked	Measured	Recovery	QC Limits
2-Fluorophenol		22	10	44 %	15 - 110 %
Phenol-d5		22	8	36 %	15 - 110 %
Nitrobenzene-d5		11	6	52 %	30 - 130 %
2-Fluorobiphenyl		11	7	58 %	30 - 130 %
2,4,6-Tribromophenol		22	12	56 %	15 - 110 %
Terphenyl-d14		11	6	54 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Sample extraction performed by EPA Method 3510C.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 * Analyzed as 4-Methylphenol.
 † Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.
 ♦ Analyzed as Azobenzene.

GROUNDWATER ANALYTICAL

EPA Method 8270C Semivolatile Organics by GC/MS-SIM (Part 2)

Field ID: NPDES Influent
 Project: NMLC/06-267
 Client: Mahoney & Douglas
 Laboratory ID: 91892-12
 Sampled: 02-22-06 13:30
 Received: 02-22-06 14:45
 Extracted: 02-23-06 15:00
 Analyzed: 02-25-06 07:24
 Analyst: CMM

Matrix: Aqueous
 Container: 1 L Amber Glass
 Preservation: Cool
 QC Batch ID: SV-1841-F
 Instrument ID: MS-6 HP 6890
 Sample Volume: 900 mL
 Final Volume: 1 mL
 Dilution Factor: 1

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	0.56
91-57-6	2-Methylnaphthalene	3.3		ug/L	0.56
208-96-8	Acenaphthylene	BRL		ug/L	0.56
83-32-9	Acenaphthene	0.84		ug/L	0.56
86-73-7	Fluorene	0.78		ug/L	0.56
85-01-8	Phenanthrene	BRL		ug/L	0.56
120-12-7	Anthracene	BRL		ug/L	0.56
206-44-0	Fluoranthene	BRL		ug/L	0.56
129-00-0	Pyrene	BRL		ug/L	0.56
56-55-3	Benzo[a]anthracene	BRL		ug/L	0.11
218-01-9	Chrysene	BRL		ug/L	0.11
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	0.11
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	0.11
50-32-8	Benzo[a]pyrene	BRL		ug/L	0.11
193-39-5	Indeno[1,2,3-c,d]pyrene	0.14		ug/L	0.11
53-70-3	Dibenzo[a,h]anthracene	0.19		ug/L	0.11
191-24-2	Benzo[g,h,i]perylene	0.14		ug/L	0.11
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.56
118-74-1	Hexachlorobenzene	BRL		ug/L	0.56
87-86-5	Pentachlorophenol	BRL		ug/L	1.1

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	22	11	48 %	15 - 110 %
Phenol-d5	22	10	45 %	15 - 110 %
Nitrobenzene-d5	11	7.5	68 %	30 - 130 %
2-Fluorobiphenyl	11	6.1	55 %	30 - 130 %
2,4,6-Tribromophenol	22	18	79 %	15 - 110 %
Terphenyl-d14	11	6.8	61 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method.
 Sample extraction performed by EPA Method 3510C.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

GROUNDWATER ANALYTICAL

Project Narrative

Project: **NMLC/06-267**
Client: **Mahoney & Douglas**

Lab ID: **91892**
Received: **02-22-06 14:45**

A. Documentation and Client Communication

The following documentation discrepancies, and client changes or amendments were noted for this project:

1. No documentation discrepancies, changes, or amendments were noted.

B. Method Modifications, Non-Conformances and Observations

The sample(s) in this project were analyzed by the references analytical method(s), and no method modifications, non-conformances or analytical issues were noted, except as indicated below:

1. Project Non-conformance. Project 91892 was received at a temperature of 9.1°C. This measurement is outside the recommended range of 2-6°C.
2. EPA 8260B Non-conformance: Sample 91892-09. Laboratory control sample (LCS) analyte tert-Butyl Alcohol was above recommended recovery limits for QC batch VM4-3454-W.
3. EPA 8270C Modification: Samples 91892-12. Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method. GC/MS-SIM was used to achieve low quantification limits necessary for regulatory compliance.

GROUNDWATER ANALYTICAL

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CHAIN-OF-CUSTODY RECORD AND WORK ORDER

No 208065

Project Name:

M&D

Firm:

GROUNDWATER ANALYTICAL

Quality Assurance/Quality Control

A. Program Overview

Groundwater Analytical conducts an active Quality Assurance program to ensure the production of high quality, valid data. This program closely follows the guidance provided by *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*, US EPA QAMS-005/80 (1980), and *Test Methods for Evaluating Solid Waste*, US EPA, SW-846, Update III (1996).

Quality Control protocols include written Standard Operating Procedures (SOPs) developed for each analytical method. SOPs are derived from US EPA methodologies and other established references. Standards are prepared from commercially obtained reference materials of certified purity, and documented for traceability.

Quality Assessment protocols for most organic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. All samples, standards, blanks, laboratory control samples, matrix spikes and sample duplicates are spiked with internal standards and surrogate compounds. All instrument sequences begin with an initial calibration verification standard and a blank; and excepting GC/MS sequences, all sequences close with a continuing calibration standard. GC/MS systems are tuned to appropriate ion abundance criteria daily, or for each 12 hour operating period, whichever is more frequent.

Quality Assessment protocols for most inorganic analyses include a minimum of one laboratory control sample, one method blank, one matrix spike sample, and one sample duplicate for each sample preparation batch. Standard curves are derived from one reagent blank and four concentration levels. Curve validity is verified by standard recoveries within plus or minus ten percent of the curve.

B. Definitions

Batches are used as the basic unit for Quality Assessment. A Batch is defined as twenty or fewer samples of the same matrix which are prepared together for the same analysis, using the same lots of reagents and the same techniques or manipulations, all within the same continuum of time, up to but not exceeding 24 hours.

Laboratory Control Samples are used to assess the accuracy of the analytical method. A Laboratory Control Sample consists of reagent water or sodium sulfate spiked with a group of target analytes representative of the method analytes. Accuracy is defined as the degree of agreement of the measured value with the true or expected value. Percent Recoveries for the Laboratory Control Samples are calculated to assess accuracy.

Method Blanks are used to assess the level of contamination present in the analytical system. Method Blanks consist of reagent water or an aliquot of sodium sulfate. Method Blanks are taken through all the appropriate steps of an analytical method. Sample data reported is not corrected for blank contamination.

Surrogate Compounds are used to assess the effectiveness of an analytical method in dealing with each sample matrix. Surrogate Compounds are organic compounds which are similar to the target analytes of interest in chemical behavior, but which are not normally found in environmental samples. Percent Recoveries are calculated for each Surrogate Compound.

GROUNDWATER ANALYTICAL

Quality Control Report Laboratory Control Samples

Category: **Inorganics**

Matrix: **Aqueous**

Units: **mg/L**

Sample Type	Method	QC Batch ID	Prep Method	Prepared	Analyzed	Instrument ID	Analyst
LCS	SM 3500 Cr D	HC-0253-W	SM 3500 Cr D	2/16/2006 22:00	2/16/2006 22:56	Lachat 8000 Autoanalyzer	DDW
LCSD	SM 3500 Cr D	HC-0253-W	SM 3500 Cr D	2/16/2006 22:00	2/16/2006 22:57	Lachat 8000 Autoanalyzer	DDW

Analyte	LCS			LCS Duplicate				QC Limits		Method
	Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	LCS	RPD	
Chromium, Hexavalent	0.10	0.11	105%	0.10	0.11	105%	0 %	80-120%	20 %	SM 3500 Cr D

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996). Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised (1983), and Methods for the Determination of Metals in Environmental Samples, Supplement I, EPA-600/R-94-111, (1994), and 40 C.F.R. 136, Appendix C (1990).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

GROUNDWATER ANALYTICAL

Quality Control Report Laboratory Control Sample

Category: **Inorganic Chemistry**
 Matrix: **Aqueous**

Analyte	Units	Spiked	Measured	Recovery	QC Limits	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	mg/L	92	96	105 %	80 - 120 %	02-23-06 14:12	TSS-1194-W	SM 2540 D	3	EB
Chlorine, Total Residual	mg/L	1	1	96 %	80 - 120 %	02-22-06 21:30	TRC-0411-W	SM 4500-Cl G	2	LJD
Oil and Grease, Total	mg/L	40	37	92 %	78 - 114 %	02-24-06 14:00	HO-0207-W	EPA 1664	3	DEB
Cyanide, Total	mg/L	0.45	0.43	96 %	80 - 120 %	02-23-06 13:39	TCN-1161-W	EPA 335.3	1	AVB

Method Reference: Methods for Chemical Analysis of Water and Wastes, US EPA, EPA-600/4-790-020 (Revised 1983), and Methods for the Determination of Inorganic Substances in Environmental Samples, US EPA, EPA/600/R-93/100 (1993), and Standard Methods for the Examination of Water and Wastewater, APHA, Twentieth Edition (1998), and Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

- 1 Instrument ID: Lachat 8000 Autoanalyzer
- 2 Instrument ID: Milton Roy Spectronic 401
- 3 Instrument ID: Mettler AT 200 Balance

GROUNDWATER ANALYTICAL

Quality Control Report Method Blank

Category: Inorganic Chemistry

Matrix: Aqueous

Analyte	Result	Units	RL	Analyzed	QC Batch	Method	Inst	Analyst
Solids, Total Suspended	BRL	mg/L	2	02-23-06 14:12	TSS-1194-W	SM 2540 D	3	EB
Chlorine, Total Residual	BRL	mg/L	0.2	02-22-06 21:30	TRC-0411-W	SM 4500-Cl G	2	LJD
Chromium, Hexavalent	BRL	mg/L	0.01	02-22-06 22:56	HC-0253-W	SM 3500-Cr D	1	DDW
Oil and Grease, Total	BRL	mg/L	5	02-24-06 14:00	HO-0207-W	EPA 1664	3	DEB
Cyanide, Total	BRL	mg/L	0.01	02-23-06 13:39	TCN-1161-W	EPA 335.3	1	AVB

Method Reference: Methods for Chemical Analysis of Water and Wastes, US EPA, EPA-600/4-790-020 (Revised 1983), and Methods for the Determination of Inorganic Substances in Environmental Samples, US EPA, EPA/600/R-93/100 (1993), and Standard Methods for the Examination of Water and Wastewater, APHA, Twentieth Edition (1998), and Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

- Report Notations:**
- BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 - RL Reporting Limit.
 - 1 Instrument ID: Lachat 8000 Autoanalyzer
 - 2 Instrument ID: Milton Roy Spectronic 401
 - 3 Instrument ID: Mettler AT 200 Balance

GROUNDWATER ANALYTICAL

Quality Control Report Laboratory Control Samples

Category: EPA 8082	LCS	LCSD
QC Batch ID: PB-2209-F	Instrument ID: GC-6 HP 5890	Instrument ID: GC-6 HP 5890
Matrix: Aqueous	Extracted: 02-23-06 07:00	Extracted: 02-23-06 07:00
Units: ug/L	Cleaned Up: 02-23-06 11:00	Cleaned Up: 02-23-06 11:00
	Analyzed: 02-23-06 14:01	Analyzed: 02-23-06 14:36
	Analyst: CRL	Analyst: CRL

CAS Number	Analyte	LCS				LCS Duplicate								QC Limits	
		Spiked	Measured		Recovery		Spiked	Measured		Recovery		RPD			
			1st Col	2nd Col	1st Col	2nd Col		1st Col	2nd Col	1st Col	2nd Col	1st Col	2nd Col	Spike	RPD
12674-11-2	Aroclor 1016	5.0	5.2	5.1	103%	102%	5.0	5.2	5.1	104%	103%	1 %	1 %	40 - 140%	30 %
11096-82-5	Aroclor 1260	5.0	5.4	5.5	109%	109%	5.0	5.6	5.6	111%	112%	2 %	2 %	40 - 140%	30 %

QC Surrogate Compound		Surrogate Recovery										QC Limits		
Tetrachloro-m-xylene		0.20	0.20	0.20	101%	98%	0.20	0.21	0.20	103%	99%			30 - 150 %
Decachlorobiphenyl		0.20	0.22	0.21	108%	104%	0.20	0.23	0.22	113%	111%			30 - 150 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

GROUNDWATER ANALYTICAL

Quality Control Report Method Blank

Category: **EPA Method 8082**
 QC Batch ID: **PB-2209-F**
 Matrix: **Aqueous**

Instrument ID: **GC-6 HP 5890**
 Extracted: **02-23-06 07:00**
 Cleaned Up: **02-23-06 11:00**
 Analyzed: **02-23-06 13:26**
 Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
12674-11-2	Aroclor 1016	BRL		ug/L	0.2
11104-28-2	Aroclor 1221	BRL		ug/L	0.2
11141-16-5	Aroclor 1232	BRL		ug/L	0.2
53469-21-9	Aroclor 1242	BRL		ug/L	0.2
12672-29-6	Aroclor 1248	BRL		ug/L	0.2
11097-69-1	Aroclor 1254	BRL		ug/L	0.2
11096-82-5	Aroclor 1260	BRL		ug/L	0.2
37324-23-5	Aroclor 1262	BRL		ug/L	0.2
11100-14-4	Aroclor 1268	BRL		ug/L	0.2

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
First Column	Tetrachloro- <i>m</i> -xylene	0.20	0.19	93 %
	Decachlorobiphenyl	0.20	0.23	114 %
Second Column	Tetrachloro- <i>m</i> -xylene	0.20	0.18	90 %
	Decachlorobiphenyl	0.20	0.22	110 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Sample extraction performed by EPA Method 3510C. Cleanup performed by EPA Method 3660B and EPA Method 3665A.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

† Non-target analyte. Result is based on a single mid-range calibration standard.

GROUNDWATER ANALYTICAL

Quality Control Report Laboratory Control Samples

Category: EPA 8270C (Part 1)
 QC Batch ID: SV-1841-L
 Matrix: Aqueous
 Units: ug/L

LCS
 Instrument ID: MS-3 HP 5890
 Extracted: 02-23-06 15:00
 Analyzed: 02-25-06 00:49
 Analyst: CMM

LCSD
 Instrument ID: MS-3 HP 5890
 Extracted: 02-23-06 15:00
 Analyzed: 02-25-06 01:29
 Analyst: CMM

Page: 1 of 2

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
62-75-9	N-Nitrosodimethylamine	50	29	58 %	50	30	59 %	2 %	40 - 140 %	25%
110-86-1	Pyridine	50	26	51 %	50	27	53 %	5 %	40 - 140 %	25%
108-95-2	Phenol	50	20	40 %	50	20	39 %	2 %	30 - 130 %	25%
62-53-3	Aniline	50	34	69 %	50	37	74 %	7 %	40 - 140 %	25%
111-44-4	Bis(2-chloroethyl) ether	50	32	64 %	50	33	66 %	4 %	40 - 140 %	25%
95-57-8	2-Chlorophenol	50	30	59 %	50	30	61 %	3 %	30 - 130 %	25%
541-73-1	1,3-Dichlorobenzene	50	33	66 %	50	35	70 %	5 %	40 - 140 %	25%
106-46-7	1,4-Dichlorobenzene	50	33	66 %	50	34	68 %	3 %	40 - 140 %	25%
100-51-6	Benzyl Alcohol	50	34	68 %	50	34	69 %	2 %	30 - 130 %	25%
95-50-1	1,2-Dichlorobenzene	50	32	64 %	50	34	67 %	5 %	40 - 140 %	25%
95-48-7	2-Methylphenol	50	31	62 %	50	33	65 %	4 %	30 - 130 %	25%
108-60-1	Bis(2-chloroisopropyl) ether	50	31	61 %	50	32	64 %	5 %	40 - 140 %	25%
106-44-5	4-Methylphenol	50	33	67 %	50	33	66 %	1 %	30 - 130 %	25%
621-64-7	N-Nitrosodi-n-propylamine	50	36	73 %	50	36	72 %	0 %	40 - 140 %	25%
98-86-2	Acetophenone	50	39	77 %	50	39	79 %	2 %	40 - 140 %	25%
67-72-1	Hexachloroethane	50	32	64 %	50	34	67 %	5 %	40 - 140 %	25%
98-95-3	Nitrobenzene	50	35	71 %	50	38	77 %	8 %	40 - 140 %	25%
78-59-1	Isophorone	50	34	69 %	50	37	74 %	7 %	40 - 140 %	25%
88-75-5	2-Nitrophenol	50	34	68 %	50	36	71 %	5 %	30 - 130 %	25%
105-67-9	2,4-Dimethylphenol	50	37	74 %	50	40	79 %	6 %	30 - 130 %	25%
111-91-1	Bis(2-chloroethoxy) methane	50	36	71 %	50	38	75 %	5 %	40 - 140 %	25%
120-83-2	2,4-Dichlorophenol	50	34	69 %	50	37	74 %	7 %	30 - 130 %	25%
120-82-1	1,2,4-Trichlorobenzene	50	36	73 %	50	39	78 %	7 %	40 - 140 %	25%
106-47-8	4-Chloroaniline	50	39	79 %	50	44	87 %	10 %	40 - 140 %	25%
87-68-3	Hexachlorobutadiene	50	32	64 %	50	35	71 %	10 %	40 - 140 %	25%
59-50-7	4-Chloro-3-methylphenol	50	38	75 %	50	40	79 %	5 %	30 - 130 %	25%
77-47-4	Hexachlorocyclopentadiene	50	31	61 %	50	32	65 %	5 %	40 - 140 %	25%
88-06-2	2,4,6-Trichlorophenol	50	36	71 %	50	36	73 %	2 %	30 - 130 %	25%
95-95-4	2,4,5-Trichlorophenol	50	40	80 %	50	40	80 %	1 %	30 - 130 %	25%
91-58-7	2-Chloronaphthalene	50	40	79 %	50	40	81 %	2 %	40 - 140 %	25%
88-74-4	2-Nitroaniline	50	44	88 %	50	45	89 %	2 %	40 - 140 %	25%
100-25-4	1,4-Dinitrobenzene	50	44	87 %	50	44	89 %	2 %	40 - 140 %	25%
131-11-3	Dimethyl phthalate	50	44	89 %	50	45	90 %	1 %	40 - 140 %	25%
99-65-0	1,3-Dinitrobenzene	50	39	79 %	50	40	79 %	0 %	40 - 140 %	25%
606-20-2	2,6-Dinitrotoluene	50	44	87 %	50	44	88 %	1 %	40 - 140 %	25%
528-29-0	1,2-Dinitrobenzene	50	44	88 %	50	45	89 %	1 %	40 - 140 %	25%
99-09-2	3-Nitroaniline	50	45	91 %	50	47	93 %	2 %	40 - 140 %	25%
51-28-5	2,4-Dinitrophenol	50	40	79 %	50	40	80 %	0 %	30 - 130 %	25%
100-02-7	4-Nitrophenol	50	23	47 %	50	22	45 %	4 %	30 - 130 %	25%
132-64-9	Dibenzofuran	50	43	86 %	50	44	88 %	3 %	40 - 140 %	25%
121-14-2	2,4-Dinitrotoluene	50	44	87 %	50	44	88 %	1 %	40 - 140 %	25%
84-66-2	Diethyl phthalate	50	44	89 %	50	45	90 %	1 %	40 - 140 %	25%
7005-72-3	4-Chlorophenyl phenyl ether	50	43	85 %	50	44	87 %	2 %	40 - 140 %	25%
100-01-6	4-Nitroaniline	50	45	91 %	50	47	93 %	2 %	40 - 140 %	25%
534-52-1	4,6-Dinitro-2-methylphenol	50	40	80 %	50	40	81 %	1 %	30 - 130 %	25%
86-30-6	N-Nitrosodiphenylamine †	50	42	85 %	50	43	86 %	2 %	40 - 140 %	25%
122-66-7	1,2-Diphenylhydrazine à	50	47	93 %	50	47	94 %	1 %	40 - 140 %	25%
101-55-3	4-Bromophenyl phenyl ether	50	48	95 %	50	49	98 %	3 %	40 - 140 %	25%

GROUNDWATER ANALYTICAL

Quality Control Report Laboratory Control Samples

Category: EPA 8270C (Part 1)
 QC Batch ID: SV-1841-L
 Matrix: Aqueous
 Units: ug/L

LCS
 Instrument ID: MS-3 HP 5890
 Extracted: 02-23-06 15:00
 Analyzed: 02-25-06 00:49
 Analyst: CMM

LCSD
 Instrument ID: MS-3 HP 5890
 Extracted: 02-23-06 15:00
 Analyzed: 02-25-06 01:29
 Analyst: CMM

Page: 2 of 2

CAS Number	Analyte	LCS			LCS Duplicate			QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike
86-74-8	Carbazole	50	47	93 %	50	47	94 %	1 %	40 - 140 %
84-74-2	Di-n-butyl phthalate	50	45	90 %	50	46	92 %	2 %	40 - 140 %
85-68-7	Butyl benzyl phthalate	50	42	85 %	50	42	84 %	1 %	40 - 140 %
91-94-1	3,3'-Dichlorobenzidine	50	43	87 %	50	43	86 %	0 %	40 - 140 %
117-81-7	Bis(2-ethylhexyl) phthalate	50	44	88 %	50	43	87 %	2 %	40 - 140 %
117-84-0	Di-n-octyl phthalate	50	47	94 %	50	48	95 %	2 %	40 - 140 %

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	20	10	49 %	20	10	51 %	15 - 110 %
Phenol-d5	20	8	41 %	20	8	40 %	15 - 110 %
Nitrobenzene-d5	10	6	64 %	10	7	73 %	30 - 130 %
2-Fluorobiphenyl	10	8	80 %	10	8	84 %	30 - 130 %
2,4,6-Tribromophenol	20	15	74 %	20	15	73 %	15 - 110 %
Terphenyl-d14	10	8	81 %	10	8	80 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Sample extraction performed by EPA Method 3520C.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

† Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.

◊ Analyzed as Azobenzene.

GROUNDWATER ANALYTICAL

Quality Control Report Method Blank

Category: **EPA Method 8270C (Part 1)**
 QC Batch ID: **SV-1841-L**
 Matrix: **Aqueous**

Instrument ID: **MS-3 HP 5890**
 Extracted: **02-23-06 15:00**
 Analyzed: **02-25-06 00:08**
 Analyst: **CMM**

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
62-75-9	N-Nitrosodimethylamine	BRL		ug/L	5
110-86-1	Pyridine	BRL		ug/L	5
108-95-2	Phenol	BRL		ug/L	5
62-53-3	Aniline	BRL		ug/L	5
111-44-4	Bis(2-chloroethyl) ether	BRL		ug/L	5
95-57-8	2-Chlorophenol	BRL		ug/L	5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	5
100-51-6	Benzyl Alcohol	BRL		ug/L	5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	5
95-48-7	2-Methylphenol	BRL		ug/L	5
108-60-1	Bis(2-chloroisopropyl) ether	BRL		ug/L	5
108-39-4/106-44-5	3 and 4-Methylphenol *	BRL		ug/L	5
621-64-7	N-Nitrosodi-n-propylamine	BRL		ug/L	5
98-86-2	Acetophenone	BRL		ug/L	5
67-72-1	Hexachloroethane	BRL		ug/L	5
98-95-3	Nitrobenzene	BRL		ug/L	5
78-59-1	Isophorone	BRL		ug/L	5
88-75-5	2-Nitrophenol	BRL		ug/L	5
105-67-9	2,4-Dimethylphenol	BRL		ug/L	5
111-91-1	Bis(2-chloroethoxy) methane	BRL		ug/L	5
120-83-2	2,4-Dichlorophenol	BRL		ug/L	5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	5
106-47-8	4-Chloroaniline	BRL		ug/L	5
87-68-3	Hexachlorobutadiene	BRL		ug/L	5
59-50-7	4-Chloro-3-methylphenol	BRL		ug/L	5
77-47-4	Hexachlorocyclopentadiene	BRL		ug/L	5
88-06-2	2,4,6-Trichlorophenol	BRL		ug/L	5
95-95-4	2,4,5-Trichlorophenol	BRL		ug/L	5
91-58-7	2-Chloronaphthalene	BRL		ug/L	5
88-74-4	2-Nitroaniline	BRL		ug/L	5
100-25-4	1,4-Dinitrobenzene	BRL		ug/L	5
131-11-3	Dimethyl phthalate	BRL		ug/L	5
99-65-0	1,3-Dinitrobenzene	BRL		ug/L	5
606-20-2	2,6-Dinitrotoluene	BRL		ug/L	5
528-29-0	1,2-Dinitrobenzene	BRL		ug/L	5
99-09-2	3-Nitroaniline	BRL		ug/L	5
51-28-5	2,4-Dinitrophenol	BRL		ug/L	5
100-02-7	4-Nitrophenol	BRL		ug/L	5
132-64-9	Dibenzofuran	BRL		ug/L	5
121-14-2	2,4-Dinitrotoluene	BRL		ug/L	5
84-66-2	Diethyl phthalate	BRL		ug/L	5
7005-72-3	4-Chlorophenyl phenyl ether	BRL		ug/L	5
100-01-6	4-Nitroaniline	BRL		ug/L	5
534-52-1	4,6-Dinitro-2-methylphenol	BRL		ug/L	5

GROUNDWATER ANALYTICAL

Quality Control Report Method Blank

Category: **EPA Method 8270C (Part 1)**
 QC Batch ID: **SV-1841-L**
 Matrix: **Aqueous**

Instrument ID: **MS-3 HP 5890**
 Extracted: **02-23-06 15:00**
 Analyzed: **02-25-06 00:08**
 Analyst: **CMM**

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
86-30-6	N-Nitrosodiphenylamine [†]	BRL		ug/L	5
122-66-7	1,2-Diphenylhydrazine [◊]	BRL		ug/L	5
101-55-3	4-Bromophenyl phenyl ether	BRL		ug/L	5
86-74-8	Carbazole	BRL		ug/L	5
84-74-2	Di-n-butyl phthalate	BRL		ug/L	5
85-68-7	Butyl benzyl phthalate	BRL		ug/L	5
91-94-1	3,3'-Dichlorobenzidine	BRL		ug/L	5
117-81-7	Bis(2-ethylhexyl) phthalate	BRL		ug/L	5
117-84-0	Di-n-octyl phthalate	BRL		ug/L	5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	20	10	49 %	15 - 110 %
Phenol-d5	20	8	39 %	15 - 110 %
Nitrobenzene-d5	10	6	63 %	30 - 130 %
2-Fluorobiphenyl	10	8	75 %	30 - 130 %
2,4,6-Tribromophenol	20	12	61 %	15 - 110 %
Terphenyl-d14	10	7	70 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Sample extraction performed by EPA Method 3520C.

Report Notations:

- BRL** Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
- * Analyzed as 4-Methylphenol.
- † Reported as sum of N-Nitrosodiphenylamine and Diphenylamine.
- ◊ Analyzed as Azobenzene.

GROUNDWATER ANALYTICAL

Quality Control Report Laboratory Control Samples

Category: EPA 8270C (Part 2)
 QC Batch ID: SV-1841-F
 Matrix: Aqueous
 Units: ug/L

LCS
 Instrument ID: MS-3 HP 5890
 Extracted: 02-23-06 15:00
 Analyzed: 02-24-06 17:10
 Analyst: CMM

LCSD
 Instrument ID: MS-6 HP 6890
 Extracted: 02-23-06 15:00
 Analyzed: 02-24-06 17:49
 Analyst: CMM

CAS Number	Analyte	LCS			LCS Duplicate			QC Limits		
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
91-20-3	Naphthalene	5.0	2.9	58 %	5.0	3.0	60 %	3 %	40 - 140 %	25%
91-57-6	2-Methylnaphthalene	5.0	3.3	65 %	5.0	3.3	66 %	1 %	40 - 140 %	25%
208-96-8	Acenaphthylene	5.0	3.8	75 %	5.0	3.8	76 %	1 %	40 - 140 %	25%
83-32-9	Acenaphthene	5.0	3.7	73 %	5.0	3.6	73 %	1 %	40 - 140 %	25%
86-73-7	Fluorene	5.0	4.2	83 %	5.0	4.1	83 %	1 %	40 - 140 %	25%
85-01-8	Phenanthrene	5.0	3.9	77 %	5.0	3.9	78 %	1 %	40 - 140 %	25%
120-12-7	Anthracene	5.0	4.2	83 %	5.0	4.2	84 %	1 %	40 - 140 %	25%
206-44-0	Fluoranthene	5.0	4.5	89 %	5.0	4.5	90 %	1 %	40 - 140 %	25%
129-00-0	Pyrene	5.0	4.0	79 %	5.0	4.0	79 %	0 %	40 - 140 %	25%
56-55-3	Benzo[a]anthracene	5.0	4.4	87 %	5.0	4.5	90 %	3 %	40 - 140 %	25%
218-01-9	Chrysene	5.0	4.1	83 %	5.0	4.2	85 %	3 %	40 - 140 %	25%
205-99-2	Benzo[b]fluoranthene	5.0	4.1	82 %	5.0	4.2	85 %	4 %	40 - 140 %	25%
207-08-9	Benzo[k]fluoranthene	5.0	4.0	80 %	5.0	4.1	83 %	3 %	40 - 140 %	25%
50-32-8	Benzo[a]pyrene	5.0	4.2	84 %	5.0	4.3	86 %	3 %	40 - 140 %	25%
193-39-5	Indeno[1,2,3-c,d]pyrene	5.0	4.0	80 %	5.0	4.1	82 %	2 %	40 - 140 %	25%
53-70-3	Dibenzo[a,h]anthracene	5.0	3.9	78 %	5.0	4.0	80 %	2 %	40 - 140 %	25%
191-24-2	Benzo[g,h,i]perylene	5.0	4.2	85 %	5.0	4.4	87 %	3 %	40 - 140 %	25%
87-68-3	Hexachlorobutadiene	5.0	3.7	74 %	5.0	3.8	76 %	3 %	40 - 140 %	25%
118-74-1	Hexachlorobenzene	5.0	4.9	99 %	5.0	4.9	99 %	0 %	40 - 140 %	25%
87-86-5	Pentachlorophenol	5.0	4.6	92 %	5.0	4.7	94 %	2 %	30 - 130 %	25%
QC Surrogate Compound		Spiked	Measured	Recovery	Spiked	Measured	Recovery			QC Limits
2-Fluorophenol		20	10	52 %	20	10	52 %			15 - 110 %
Phenol-d5		20	9	44 %	20	9	44 %			15 - 110 %
Nitrobenzene-d5		10	8	79 %	10	8	84 %			30 - 130 %
2-Fluorobiphenyl		10	7	72 %	10	7	73 %			30 - 130 %
2,4,6-Tribromophenol		20	19	93 %	20	19	95 %			15 - 110 %
Terphenyl-d14		10	8	77 %	10	8	78 %			30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Sample extraction performed by EPA Method 3510C.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

GROUNDWATER ANALYTICAL

Quality Control Report Method Blank

Category: EPA Method 8270C (Part 2)
 QC Batch ID: SV-1841-F
 Matrix: Aqueous

Instrument ID: MS-6 HP 6890
 Extracted: 02-23-06 15:00
 Analyzed: 02-24-06 18:28
 Analyst: CMM

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
91-20-3	Naphthalene	BRL		ug/L	0.5
91-57-6	2-Methylnaphthalene	BRL		ug/L	0.5
208-96-8	Acenaphthylene	BRL		ug/L	0.5
83-32-9	Acenaphthene	BRL		ug/L	0.5
86-73-7	Fluorene	BRL		ug/L	0.5
85-01-8	Phenanthrene	BRL		ug/L	0.5
120-12-7	Anthracene	BRL		ug/L	0.5
206-44-0	Fluoranthene	BRL		ug/L	0.5
129-00-0	Pyrene	BRL		ug/L	0.5
56-55-3	Benzo[a]anthracene	BRL		ug/L	0.1
218-01-9	Chrysene	BRL		ug/L	0.1
205-99-2	Benzo[b]fluoranthene	BRL		ug/L	0.1
207-08-9	Benzo[k]fluoranthene	BRL		ug/L	0.1
50-32-8	Benzo[a]pyrene	BRL		ug/L	0.1
193-39-5	Indeno[1,2,3-c,d]pyrene	BRL		ug/L	0.1
53-70-3	Dibenz[a,h]anthracene	BRL		ug/L	0.1
191-24-2	Benzo[g,h,i]perylene	BRL		ug/L	0.1
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
118-74-1	Hexachlorobenzene	BRL		ug/L	0.5
87-86-5	Pentachlorophenol	BRL		ug/L	1.0

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
2-Fluorophenol	20	11	54 %	15 - 110 %
Phenol-d5	20	8.8	44 %	15 - 110 %
Nitrobenzene-d5	10	7.9	79 %	30 - 130 %
2-Fluorobiphenyl	10	7.2	72 %	30 - 130 %
2,4,6-Tribromophenol	20	17	84 %	15 - 110 %
Terphenyl-d14	10	7.2	72 %	30 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Method modified by use of selected ion monitoring (SIM) in accordance with Section 7.5.5 of the method.
 Sample extraction performed by EPA Method 3510C.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

GROUNDWATER ANALYTICAL

Quality Control Report Laboratory Control Samples

Category: **Metals**

Matrix: **Aqueous**

Units: **mg/L**

<u>Sample Type</u>	<u>Method</u>	<u>QC Batch ID</u>	<u>Prep Method</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Instrument ID</u>	<u>Analyst</u>
LCS	EPA 7041	MB-1944-WL	EPA 3010A	02-23-06 09:14	02-24-06 16:13	GFAA-1 PE 5100 Zeeman MWR	
LCS	EPA 6010B	MB-1944-WL	EPA 3010A	02-23-06 09:14	02-27-06 14:04	ICP-2 PE 3300 MWR	
LCS	EPA 7470A	MP-1802-WL	EPA 7470A	02-23-06 09:10	02-23-06 12:42	CVAA-1 PE FIMS KLB	
LCSD	EPA 7041	MB-1944-WL	EPA 3010A	02-23-06 09:14	02-23-06 12:45	GFAA-1 PE 5100 Zeeman MWR	
LCSD	EPA 6010B	MB-1944-WL	EPA 3010A	02-23-06 09:14	02-28-06 15:19	ICP-2 PE 3300 MWR	
LCSD	EPA 7470A	MP-1802-WL	EPA 7470A	02-23-06 09:10	02-23-06 12:45	CVAA-1 PE FIMS KLB	

<u>CAS Number</u>	<u>Analyte</u>	LCS			LCS Duplicate				QC Limits		<u>Method</u>
		<u>Spiked</u>	<u>Measured</u>	<u>Recovery</u>	<u>Spiked</u>	<u>Measured</u>	<u>Recovery</u>	<u>RPD</u>	<u>LCS</u>	<u>RPD</u>	
7440-36-0	Antimony	0.050	0.045	90%	0.050	0.043	85%	3 %	80-120 %	20 %	EPA 7041
7440-38-2	Arsenic	5.0	5.6	112%	5.0	5.5	109%	1 %	80-120 %	20 %	EPA 6010B
7440-43-9	Cadmium	1.0	1.1	105%	1.0	1.0	103%	1 %	80-120 %	20 %	EPA 6010B
7440-47-3	Chromium	1.0	1.0	103%	1.0	1.0	101%	1 %	80-120 %	20 %	EPA 6010B
7440-50-8	Copper	1.0	1.0	100%	1.0	0.99	99%	1 %	80-120 %	20 %	EPA 6010B
7439-89-6	Iron	5.0	5.0	100%	5.0	4.9	98%	1 %	80-120 %	20 %	EPA 6010B
7439-92-1	Lead	0.050	0.0503	101%	0.050	0.0508	102%	0 %	80-120 %	20 %	EPA 6010B
7439-97-6	Mercury	0.0010	0.0011	110%	0.0010	0.0010	104%	3 %	80-120 %	20 %	EPA 7470A
7440-02-0	Nickel	1.0	1.0	101%	1.0	1.0	99%	1 %	80-120 %	20 %	EPA 6010B
7782-49-2	Selenium	0.050	0.049	99%	0.050	0.047	93%	3 %	80-120 %	20 %	EPA 6010B
7440-22-4	Silver	1.0	1.1	105%	1.0	1.0	103%	1 %	80-120 %	20 %	EPA 6010B
7440-66-6	Zinc	1.0	1.1	106%	1.0	1.0	104%	1 %	80-120 %	20 %	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

GROUNDWATER ANALYTICAL

Quality Control Report Method Blank

Category: **Metals**
 Matrix: **Aqueous**

Analysis Method	QC Batch ID	Prep Method	Prepared	Sample Volume	Instrument ID	Analyst
EPA 7041	MB-1944-WB	EPA 3010A	02-23-06 09:14	50 mL	CFAA-I PE 5100 Ziemann	MWR
EPA 6010B	MB-1944-WB	EPA 3010A	02-23-06 09:14	50 mL	ICP-2 PE 3300	MWR
EPA 7470A	MP-1802-WB	EPA 7470A	02-23-06 09:10	25 mL	CVAA-I PE FINIS	KLB

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit	DF	Analyzed	Method
7440-36-0	Antimony	BRL		mg/L	0.006	1	02-24-06 16:07	EPA 7041
7440-38-2	Arsenic	BRL		mg/L	0.01	1	02-27-06 14:01	EPA 6010B
7440-43-9	Cadmium	BRL		mg/L	0.005	1	02-27-06 14:01	EPA 6010B
7440-47-3	Chromium	BRL		mg/L	0.01	1	02-27-06 14:01	EPA 6010B
7440-50-8	Copper	BRL		mg/L	0.025	1	02-27-06 14:01	EPA 6010B
7439-89-6	Iron	BRL		mg/L	0.1	1	02-27-06 14:01	EPA 6010B
7439-92-1	Lead	BRL		mg/L	0.001	1	02-28-06 09:43	EPA 6010B
7439-97-6	Mercury	BRL		mg/L	0.0002	1	02-23-06 12:42	EPA 7470A
7440-02-0	Nickel	BRL		mg/L	0.04	1	02-27-06 14:01	EPA 6010B
7782-49-2	Selenium	BRL		mg/L	0.005	1	02-28-06 15:11	EPA 6010B
7440-22-4	Silver	BRL		mg/L	0.007	1	02-27-06 14:01	EPA 6010B
7440-66-6	Zinc	BRL		mg/L	0.2	1	02-27-06 14:01	EPA 6010B

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.
 DF Dilution Factor.

GROUNDWATER ANALYTICAL

Quality Control Report Laboratory Control Samples

Category: EPA Method 8260B
 QC Batch ID: VM4-3454-WL
 Matrix: Aqueous
 Units: ug/L

LCS
 Instrument ID: MS-4 HP 6890
 Analyzed: 02-25-06 07:54
 Analyst: LMG

LCSD
 Instrument ID: MS-4 HP 6890
 Analyzed: 02-25-06 08:23
 Analyst: LMG

Page: 1 of 2

CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
75-71-8	Dichlorodifluoromethane	10	8.7	87 %	10	9	90 %	3 %	70 - 130 %	25%
74-87-3	Chloromethane	10	9.4	94 %	10	9.2	92 %	3 %	70 - 130 %	25%
75-01-4	Vinyl Chloride	10	10	100 %	10	9.3	93 %	8 %	70 - 130 %	25%
74-83-9	Bromomethane	10	11	108 %	10	10	102 %	6 %	70 - 130 %	25%
75-00-3	Chloroethane	10	11	110 %	10	9.9	99 %	11 %	70 - 130 %	25%
75-69-4	Trichlorofluoromethane	10	9.2	92 %	10	9.7	97 %	5 %	70 - 130 %	25%
60-29-7	Diethyl Ether	20	18	92 %	20	22	108 %	16 %	70 - 130 %	25%
75-35-4	1,1-Dichloroethene	10	8.7	87 %	10	9.3	93 %	6 %	70 - 130 %	25%
76-13-1	1,1,2-Trichlorotrifluoroethane	20	17	86 %	20	17	84 %	3 %	70 - 130 %	25%
67-64-1	Acetone	20	17	83 %	20	16	81 %	2 %	70 - 130 %	25%
75-15-0	Carbon Disulfide	20	16	81 %	20	16	79 %	2 %	70 - 130 %	25%
75-09-2	Methylene Chloride	10	7.2	72 %	10	7.2	72 %	1 %	70 - 130 %	25%
156-60-5	trans-1,2-Dichloroethene	10	9.9	99 %	10	10	101 %	3 %	70 - 130 %	25%
1634-04-4	Methyl tert-butyl Ether (MTBE)	10	10	102 %	10	11	106 %	3 %	70 - 130 %	25%
75-34-3	1,1-Dichloroethane	10	11	105 %	10	10	103 %	2 %	70 - 130 %	25%
594-20-7	2,2-Dichloropropane	10	10	103 %	10	9.6	96 %	7 %	70 - 130 %	25%
156-59-2	cis-1,2-Dichloroethene	10	10	102 %	10	9.7	97 %	5 %	70 - 130 %	25%
78-93-3	2-Butanone (MEK)	20	22	110 %	20	20	100 %	9 %	70 - 130 %	25%
74-97-5	Bromochloromethane	10	10	103 %	10	11	107 %	3 %	70 - 130 %	25%
109-99-9	Tetrahydrofuran (THF)	20	22	110 %	20	24	121 %	9 %	70 - 130 %	25%
67-66-3	Chloroform	10	9.9	99 %	10	9.9	99 %	0 %	70 - 130 %	25%
71-55-6	1,1,1-Trichloroethane	10	11	108 %	10	8.7	87 %	22 %	70 - 130 %	25%
56-23-5	Carbon Tetrachloride	10	10	101 %	10	10	100 %	1 %	70 - 130 %	25%
563-58-6	1,1-Dichloropropene	10	11	108 %	10	8.8	88 %	20 %	70 - 130 %	25%
71-43-2	Benzene	10	11	107 %	10	10	103 %	4 %	70 - 130 %	25%
107-06-2	1,2-Dichloroethane	10	11	111 %	10	9.7	97 %	13 %	70 - 130 %	25%
79-01-6	Trichloroethene	10	10	103 %	10	9.7	97 %	6 %	70 - 130 %	25%
78-87-5	1,2-Dichloropropane	10	11	109 %	10	10	103 %	6 %	70 - 130 %	25%
74-95-3	Dibromomethane	10	11	109 %	10	11	106 %	3 %	70 - 130 %	25%
75-27-4	Bromodichloromethane	10	11	111 %	10	11	109 %	2 %	70 - 130 %	25%
123-91-1	1,4-Dioxane	200	150	75 %	200	140	72 %	4 %	70 - 130 %	25%
10061-01-5	cis-1,3-Dichloropropene	10	11	108 %	10	8.8	88 %	20 %	70 - 130 %	25%
108-10-1	4-Methyl-2-Pentanone (MIBK)	20	22	112 %	20	23	113 %	1 %	70 - 130 %	25%
108-88-3	Toluene	10	11	108 %	10	10	104 %	4 %	70 - 130 %	25%
10061-02-6	trans-1,3-Dichloropropene	10	10	104 %	10	11	107 %	3 %	70 - 130 %	25%
79-00-5	1,1,2-Trichloroethane	10	10	104 %	10	10	105 %	1 %	70 - 130 %	25%
127-18-4	Tetrachloroethene	10	9.9	99 %	10	9.8	98 %	0 %	70 - 130 %	25%
142-28-9	1,3-Dichloropropane	10	9.8	98 %	10	10	102 %	4 %	70 - 130 %	25%
591-78-6	2-Hexanone	20	22	111 %	20	23	116 %	5 %	70 - 130 %	25%
124-48-1	Dibromochloromethane	10	10	102 %	10	11	108 %	6 %	70 - 130 %	25%
106-93-4	1,2-Dibromoethane (EDB)	10	10	103 %	10	10	103 %	0 %	70 - 130 %	25%
108-90-7	Chlorobenzene	10	10	100 %	10	10	101 %	2 %	70 - 130 %	25%
630-20-6	1,1,1,2-Tetrachloroethane	10	10	104 %	10	11	105 %	1 %	70 - 130 %	25%
100-41-4	Ethylbenzene	10	10	101 %	10	10	104 %	3 %	70 - 130 %	25%
108-38-3/106-42-3	meta-Xylene and para-Xylene	20	20	101 %	20	20	102 %	1 %	70 - 130 %	25%
95-47-6	ortho-Xylene	10	9.9	99 %	10	10	100 %	1 %	70 - 130 %	25%
100-42-5	Styrene	10	10	102 %	10	11	105 %	3 %	70 - 130 %	25%
75-25-2	Bromoform	10	11	106 %	10	11	114 %	7 %	70 - 130 %	25%
98-82-8	Isopropylbenzene	10	10	102 %	10	10	104 %	2 %	70 - 130 %	25%

GROUNDWATER ANALYTICAL

Quality Control Report Laboratory Control Samples

Category: EPA Method 8260B
 QC Batch ID: VM4-3454-WL
 Matrix: Aqueous
 Units: ug/L

LCS
 Instrument ID: MS-4 HP 6890
 Analyzed: 02-25-06 07:54
 Analyst: LMG

LCSD
 Instrument ID: MS-4 HP 6890
 Analyzed: 02-25-06 08:23
 Analyst: LMG

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CAS Number	Analyte	LCS			LCS Duplicate				QC Limits	
		Spiked	Measured	Recovery	Spiked	Measured	Recovery	RPD	Spike	RPD
108-86-1	Bromobenzene	10	10	102 %	10	11	106 %	3 %	70 - 130 %	25%
79-34-5	1,1,2,2-Tetrachloroethane	10	10	105 %	10	11	108 %	3 %	70 - 130 %	25%
96-18-4	1,2,3-Trichloropropane	10	13	128 %	10	13	128 %	0 %	70 - 130 %	25%
103-65-1	n-Propylbenzene	10	10	105 %	10	10	104 %	1 %	70 - 130 %	25%
95-49-8	2-Chlorotoluene	10	10	102 %	10	10	102 %	0 %	70 - 130 %	25%
108-67-8	1,3,5-Trimethylbenzene	10	11	106 %	10	10	105 %	1 %	70 - 130 %	25%
106-43-4	4-Chlorotoluene	10	10	103 %	10	10	102 %	2 %	70 - 130 %	25%
98-06-6	tert-Butylbenzene	10	10	104 %	10	10	104 %	0 %	70 - 130 %	25%
95-63-6	1,2,4-Trimethylbenzene	10	11	107 %	10	11	108 %	1 %	70 - 130 %	25%
135-98-8	sec-Butylbenzene	10	10	103 %	10	10	103 %	0 %	70 - 130 %	25%
541-73-1	1,3-Dichlorobenzene	10	10	100 %	10	10	101 %	1 %	70 - 130 %	25%
99-87-6	4-Isopropyltoluene	10	10	104 %	10	10	103 %	1 %	70 - 130 %	25%
106-46-7	1,4-Dichlorobenzene	10	10	100 %	10	10	101 %	1 %	70 - 130 %	25%
95-50-1	1,2-Dichlorobenzene	10	10	101 %	10	10	103 %	2 %	70 - 130 %	25%
104-51-8	n-Butylbenzene	10	11	106 %	10	11	106 %	0 %	70 - 130 %	25%
96-12-8	1,2-Dibromo-3-chloropropane	10	10	101 %	10	10	103 %	2 %	70 - 130 %	25%
120-82-1	1,2,4-Trichlorobenzene	10	10	103 %	10	10	104 %	1 %	70 - 130 %	25%
87-68-3	Hexachlorobutadiene	10	10	103 %	10	10	102 %	2 %	70 - 130 %	25%
91-20-3	Naphthalene	10	11	109 %	10	11	113 %	4 %	70 - 130 %	25%
87-61-6	1,2,3-Trichlorobenzene	10	10	104 %	10	10	104 %	0 %	70 - 130 %	25%
75-65-0	tert-Butyl Alcohol (TBA)	200	310	155 % q	200	270	137 % q	13 %	70 - 130 %	25%
108-20-3	Di-isopropyl Ether (DIPE)	10	11	109 %	10	11	106 %	3 %	70 - 130 %	25%
637-92-3	Ethyl tert-butyl Ether (ETBE)	10	10	102 %	10	10	103 %	0 %	70 - 130 %	25%
994-05-8	tert-Amyl Methyl Ether (TAME)	10	11	108 %	10	11	112 %	4 %	70 - 130 %	25%

QC Surrogate Compound	Spiked	Measured	Recovery	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	9.7	97 %	10	9.5	95 %	70 - 130 %
1,2-Dichloroethane-d ₂	10	9.1	91 %	10	8	80 %	70 - 130 %
Toluene-d ₈	10	11	108 %	10	11	106 %	70 - 130 %
4-Bromofluorobenzene	10	9.8	98 %	10	10	102 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Sample preparation performed by EPA Method 5030B.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

q Recovery outside recommended limits.

GROUNDWATER ANALYTICAL

Quality Control Report Method Blank

Category: **EPA Method 8260B**
 QC Batch ID: **VM4-3454-WB**
 Matrix: **Aqueous**

Instrument ID: **MS-4 HP 6890**
 Analyzed: **02-25-06 08:59**
 Analyst: **LMG**

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CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
75-71-8	Dichlorodifluoromethane	BRL		ug/L	0.5
74-87-3	Chloromethane	BRL		ug/L	0.5
75-01-4	Vinyl Chloride	BRL		ug/L	0.5
74-83-9	Bromomethane	BRL		ug/L	0.5
75-00-3	Chloroethane	BRL		ug/L	0.5
75-69-4	Trichlorofluoromethane	BRL		ug/L	0.5
60-29-7	Diethyl Ether	BRL		ug/L	0.5
75-35-4	1,1-Dichloroethene	BRL		ug/L	2
76-13-1	1,1,2-Trichlorotrifluoroethane	BRL		ug/L	0.5
67-64-1	Acetone	BRL		ug/L	5
75-15-0	Carbon Disulfide	BRL		ug/L	10
75-09-2	Methylene Chloride	BRL		ug/L	5
156-60-5	trans- 1,2-Dichloroethene	BRL		ug/L	2.5
1634-04-4	Methyl tert- butyl Ether (MTBE)	BRL		ug/L	0.5
75-34-3	1,1-Dichloroethane	BRL		ug/L	0.5
594-20-7	2,2-Dichloropropane	BRL		ug/L	0.5
156-59-2	cis- 1,2-Dichloroethene	BRL		ug/L	0.5
78-93-3	2-Butanone (MEK)	BRL		ug/L	5
74-97-5	Bromochloromethane	BRL		ug/L	0.5
109-99-9	Tetrahydrofuran (THF)	BRL		ug/L	5
67-66-3	Chloroform	BRL		ug/L	0.5
71-55-6	1,1,1-Trichloroethane	BRL		ug/L	0.5
56-23-5	Carbon Tetrachloride	BRL		ug/L	0.5
563-58-6	1,1-Dichloropropene	BRL		ug/L	0.5
71-43-2	Benzene	BRL		ug/L	0.5
107-06-2	1,2-Dichloroethane	BRL		ug/L	0.5
79-01-6	Trichloroethene	BRL		ug/L	0.5
78-87-5	1,2-Dichloropropane	BRL		ug/L	0.5
74-95-3	Dibromomethane	BRL		ug/L	0.5
75-27-4	Bromodichloromethane	BRL		ug/L	0.5
123-91-1	1,4-Dioxane	BRL		ug/L	500
10061-01-5	cis- 1,3-Dichloropropene	BRL		ug/L	0.5
108-10-1	4-Methyl-2-Pentanone (MIBK)	BRL		ug/L	5
108-88-3	Toluene	BRL		ug/L	0.5
10061-02-6	trans- 1,3-Dichloropropene	BRL		ug/L	0.5
79-00-5	1,1,2-Trichloroethane	BRL		ug/L	0.5
127-18-4	Tetrachloroethene	BRL		ug/L	0.5
142-28-9	1,3-Dichloropropane	BRL		ug/L	0.5
591-78-6	2-Hexanone	BRL		ug/L	5
124-48-1	Dibromochloromethane	BRL		ug/L	0.5
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.5
108-90-7	Chlorobenzene	BRL		ug/L	0.5
630-20-6	1,1,1,2-Tetrachloroethane	BRL		ug/L	0.5
100-41-4	Ethylbenzene	BRL		ug/L	0.5
108-38-3/106-42-3	meta- Xylene and para- Xylene	BRL		ug/L	0.5
95-47-6	ortho- Xylene	BRL		ug/L	0.5
100-42-5	Styrene	BRL		ug/L	0.5
75-25-2	Bromoform	BRL		ug/L	0.5
98-82-8	Isopropylbenzene	BRL		ug/L	0.5

GROUNDWATER ANALYTICAL

Quality Control Report Method Blank

Category: **EPA Method 8260B**
 QC Batch ID: **VM4-3454-WB**
 Matrix: **Aqueous**

Instrument ID: **MS-4 HP 6890**
 Analyzed: **02-25-06 08:59**
 Analyst: **LMG**

Page: 2 of 2

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
108-86-1	Bromobenzene	BRL		ug/L	0.5
79-34-5	1,1,2,2-Tetrachloroethane	BRL		ug/L	0.5
96-18-4	1,2,3-Trichloropropane	BRL		ug/L	0.5
103-65-1	n-Propylbenzene	BRL		ug/L	0.5
95-49-8	2-Chlorotoluene	BRL		ug/L	0.5
108-67-8	1,3,5-Trimethylbenzene	BRL		ug/L	0.5
106-43-4	4-Chlorotoluene	BRL		ug/L	0.5
98-06-6	tert-Butylbenzene	BRL		ug/L	0.5
95-63-6	1,2,4-Trimethylbenzene	BRL		ug/L	0.5
135-98-8	sec-Butylbenzene	BRL		ug/L	0.5
541-73-1	1,3-Dichlorobenzene	BRL		ug/L	0.5
99-87-6	4-Isopropyltoluene	BRL		ug/L	0.5
106-46-7	1,4-Dichlorobenzene	BRL		ug/L	0.5
95-50-1	1,2-Dichlorobenzene	BRL		ug/L	0.5
104-51-8	n-Butylbenzene	BRL		ug/L	0.5
96-12-8	1,2-Dibromo-3-chloropropane	BRL		ug/L	0.5
120-82-1	1,2,4-Trichlorobenzene	BRL		ug/L	0.5
87-68-3	Hexachlorobutadiene	BRL		ug/L	0.5
91-20-3	Naphthalene	BRL		ug/L	0.5
87-61-6	1,2,3-Trichlorobenzene	BRL		ug/L	0.5
75-65-0	tert-Butyl Alcohol (TBA)	BRL		ug/L	20
108-20-3	Di-isopropyl Ether (DIPE)	BRL		ug/L	0.5
637-92-3	Ethyl tert-butyl Ether (ETBE)	BRL		ug/L	0.5
994-05-8	tert-Amyl Methyl Ether (TAME)	BRL		ug/L	0.5

QC Surrogate Compound	Spiked	Measured	Recovery	QC Limits
Dibromofluoromethane	10	9.4	94 %	70 - 130 %
1,2-Dichloroethane-d ₄	10	9.5	95 %	70 - 130 %
Toluene-d ₈	10	11	108 %	70 - 130 %
4-Bromofluorobenzene	10	10	100 %	70 - 130 %

Method Reference: Test Methods for Evaluating Solid Waste, US EPA, SW-846, Third Edition, Update III (1996).
 Sample preparation performed by EPA Method 5030B.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

**GROUNDWATER
ANALYTICAL****Quality Control Report
Laboratory Control Sample**

Category: **EPA Method 504.1**
QC Batch ID: **PV-0819-E**
Matrix: **Aqueous**
Units: **ug/L**

Instrument ID: **GC-5 HP 5890**
Extracted: **02-28-06 10:00**
Analyzed: **02-28-06 10:43**
Analyst: **CRL**

CAS Number	Analyte	Spiked	Measured		Recovery		QC Limits
			1st Column	2nd Column	1st Column	2nd Column	
106-93-4	1,2-Dibromoethane (EDB)	0.20	0.20	0.20	100 %	100 %	70 - 130 %
96-12-8	1,2-Dibromo-3-Chloropropane (DBC)	0.20	0.19	0.19	96 %	96 %	70 - 130 %

Method Reference: Methods for the Determination of Organic Compounds in Drinking Water, Supplement III, US EPA, EPA-600/R-95/131 (1995). Method Revision 1.1.

Report Notations: All calculations performed prior to rounding. Quality Control Limits are defined by the methodology, or alternatively based upon the historical average recovery plus or minus three standard deviation units.

**GROUNDWATER
ANALYTICAL****Quality Control Report
Method Blank**

Category: **EPA Method 504.1**
QC Batch ID: **PV-0819-E**
Matrix: **Aqueous**

Instrument ID: **GC-5 HP 5890**
Extracted: **02-28-06 10:00**
Analyzed: **02-28-06 12:29**
Analyst: **CRL**

CAS Number	Analyte	Concentration	Notes	Units	Reporting Limit
106-93-4	1,2-Dibromoethane (EDB)	BRL		ug/L	0.02
96-12-8	1,2-Dibromo-3-Chloropropane (DBCP)	BRL		ug/L	0.02

Method Reference: Methods for the Determination of Organic Compounds in Drinking Water, Supplement III, US EPA, EPA-600/R-95/131 (1995). Method Revision 1.1.

Report Notations: BRL Indicates concentration, if any, is below reporting limit for analyte. Reporting limit is the lowest concentration that can be reliably quantified under routine laboratory operating conditions. Reporting limits are adjusted for sample size and dilution.

GROUNDWATER ANALYTICAL

Certifications and Approvals

Groundwater Analytical maintains environmental laboratory certification in a variety of states.
Copies of our current certificates may be obtained from our website:

<http://www.groundwateranalytical.com/qualifications.htm>

CONNECTICUT, Department of Health Services, PH-0586

Categories: Potable Water, Wastewater, Solid Waste and Soil
http://www.dph.state.ct.us/BRS/Environmental_Lab/OutStateLabList.htm

FLORIDA, Department of Health, Bureau of Laboratories, E87643

Categories: SDWA, CWA, RCRA/CERCLA
<http://www.floridadep.org/labs/qa/dohforms.htm>

MAINE, Department of Human Services, MA103

Categories: Drinking Water and Wastewater
<http://www.state.me.us/dhs/eng/water/Compliance.htm>

MASSACHUSETTS, Department of Environmental Protection, M-MA-103

Categories: Potable Water and Non-Potable Water
<http://www.state.ma.us/dep/bspt/wes/files/certlabs.pdf>

NEW HAMPSHIRE, Department of Environmental Services, 202703

Categories: Drinking Water and Wastewater
<http://www.des.state.nh.us/asp/NHELAP/labsview.asp>

NEW YORK, Department of Health, 11754

Categories: Potable Water, Non-Potable Water and Solid Waste
<http://www.wadsworth.org/labcert/elap/comm.html>

PENNSYLVANIA, Department of Environmental Protection, 68-665

Environmental Laboratory Registration (Non-drinking water and Non-wastewater)
<http://www.dep.state.pa.us/Labs/Registered/>

RHODE ISLAND, Department of Health, 54

Categories: Surface Water, Air, Wastewater, Potable Water, Sewage
http://www.healthri.org/labs/labsCT_MA.htm

U.S. Department of Agriculture, Soil Permit, S-53921

Foreign soil import permit

VERMONT, Department of Environmental Conservation, Water Supply Division

Category: Drinking Water
<http://www.vermontdrinkingwater.org/wsops/labtable.PDF>

Town of Bourne - NMLC
NPDES RGP-NOI
110-120 Main St., Buzzards Bay, MA
RTN 4-10373 and 4-1348
4/6/06

ATTACHMENT 3

FIGURES

- Figure 1 USGS Topographic Map of Bourne
- Figure 2 Site Design Plan, TEC, Sheet C 2.0 and C 3.0
- Figure 3 Dewatering and Treatment System Schematic
- Figure 4 DEP Priority Resources Map

Nightingale
Pt

Buzzards
Bay

Armory Bourne Corners

SCHOOLS

BRISTOL CO.
BOSTON CO.

Buzzards Bay Subject Property

CAPE COD

Mass Maritime
Academy

Tidal Flat

Gray
ables

CONRAIL

SPOR

River

Oakland
Grove
Cem

Old Bourne
Cem

Cranberry Bogs

Gray Gables
Cem

BM 19

Jr High Sch

ROAD

16° W

Name: POCASSET

Date: 4/7/2006

Scale: 1 inch equals 1000 feet

Location: 041° 44' 31.4" N 070° 36' 32.7" W

Caption: PROPERTY LOCUS